UNIVERSITY OF ALBERTA

Adolescent Access to Sexually Explicit Media Content in Alberta: A Human Ecological Investigation

By

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ABSTRACT

To investigate adolescent access to and use of sexually explicit media content in their homes and communities, an anonymous, in-class paper-and-pencil questionnaire was administered to 425 students in grade eight from urban and rural communities in Alberta. Approximately 90% of males and 70% of females reported having accessed sexually explicit media content at least once, with males being much more likely to report frequent and intentional access. Based on Bronfenbrenner's human ecological framework, a causal model specifying the role of exosystem factors, (parental education), microsystem factors (parental mediation, media environment, peers), and the adolescent's bioecological characteristics (gender, interest in sexual content) on access to sexually explicit media content was tested. Different causal models were revealed for males and females with 64% variance in males' access and 50% of females' access being accounted for by the models. Personal interest in sexual content, peer influence, media environment, and restrictive parental mediation all contributed directly and parent education, non-restrictive parental mediation, and restrictive parental mediation contributed indirectly to adolescent males' access to sexually explicit media content. In contrast, personal interest, peer influence, and parent education contributed directly and restrictive parental mediation contributed indirectly to adolescent females' access to sexually explicit media content. Implications of these findings for parents, educators, government, and industry media regulators, and for adolescents, are explored.

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To the young people who participated in this research—
wishing each of you a rewarding, safe,
and joyful transition into young adulthood.

TABLE OF CONTENTS

Chapter

I. INTRODUCTION 1

II. REVIEW OF THE LITERATURE

A. Media Environment of Canadian Adolescents 8

B. Sexually Explicit Content in the Media Environment 9

C. Adolescent Use of Sexually Explicit Media 12

D. Social Contexts for Adolescent Use of and Exposure to Sexually Explicit Media 19

E. Links Between Sexual Media and Adolescent Sexual Health—A Public Health Perspective 21

F. Moral, Psychological, and Behavioural Effects of Sexually Explicit Media Content on Adolescents 27

G. Functions of Sexually Explicit Content for Adolescents 30

H. Mediation of Adolescent Access to Sexually Explicit Media--Parenting and Policy 33

I. Areas for Future Research 47

J. Conclusions 49

III. THEORETICAL FRAMEWORK

A. Human Ecological Human Ecology Theoretical Model For the Study of Adolescent Exposure to Sexually Explicit Media 51

B. Study Purpose and Hypotheses 67

IV. METHODS

A. Sampling Procedure 76

B. Survey Instrument 78

C. Data Collection Procedures 78

D. Measures 82

E. Procedure for Data Analysis 84

V. RESULTS

A. Sample 86

B. Summary of Findings for Discrete Questionnaire Items—
Specific Behaviours and Environmental Characteristics 87

C. Descriptive Statistics and Main Effects for Indices 91

D. Relationships Among the Indices 97

E. Testing the Causal Model 99

F. Summary of Major Findings 110

VI. DISCUSSION

A. New Contributions to the Literature 115

B. Implications for the Human Ecological Theoretical
Framework 119

C. Implications of the Current Research 125

VII. REFERENCES 139

VIII. APPENDICES

A. Information Package for School District Superintendents 156

B. Information Package for Principals 162

C. Information Package for Teachers 168

D. Teacher Instructions for Administering the Adolescents and Restricted Media Questionnaire 175

E. Information Sheet for Parents 178

F. Consent Form for Parents 182

G. Information Sheet for Students 184

H. Consent Form for Students 188

I. Questionnaire for *Adolescents and Restricted Media Study* 190

J. Design and Scoring of Questionnaire Items for Indices 209

K. Descriptive Statistics and Analysis of Variance for Discrete Questionnaire Items 219

LIST OF TABLES

Table 1	Reported Rates of Adolescent Exposure to Sexually Explicit Internet Content by Country	17
Table 2	Reported Rates of Adolescent Exposure to Sexually Explicit Content on Media Other than the Internet by Country	18
Table 3	Mean Scores for Indices Predicting Access to Sexually Explicit Media	92
Table 4	Means for Indices Predicting Adolescent Access to Sexually Explicit Media with Main Effects for Gender	92
Table 5	Means for Indices Predicting Adolescent Access to Sexually Explicit Media with Main Effects for Geographic Location	93
Table 6	Correlations Matrix for Variables Predicting Access to Sexually Explicit Content	98
Table 7	Standardized Regression Coefficients for Predictors of Sexually Explicit Media for Females	100
Table 8	Standardized Regression Coefficients for Predictors of Sexually Explicit Media for Males	100
Table 9	Standardized Regression Coefficients for Predictors of Interest in Sexual Content for Females	101
Table 10	Standardized Regression Coefficients for Predictors of Interest in Sexual Content for Males	102

Table 11	Standardized Regression Coefficients for Predictors of Peer Influence for Females	103
Table 12	Standardized Regression Coefficients for Predictors of Peer Influence for Males	103
Table 13	Standardized Regression Coefficients for Predictors of Media Environment for Females	104
Table 14	Standardized Regression Coefficients for Predictors of Restrictive Media Environment for Males	104
Table 15	Standardized Regression Coefficients for Predictors of Restrictive Mediation for Females	105
Table 16	Standardized Regression Coefficients for Predictors of Restrictive Mediation for Males	105
Table 17	Standardized Regression Coefficients for Predictors of Nonrestrictive Mediation for Females	106
Table 18	Standardized Regression Coefficients for Predictors of Nonrestrictive Mediation for Males	106
Table 19	Percentages of Boys and Girls Reporting Frequency of Viewing Pornographic Materials on the Internet	221
Table 20	Percentages of Boys and Girls Reporting Frequency of Viewing Pornographic Materials on Video or DVD	221
Table 21	Percentages of Urban and Rural Participants Reporting	

	Frequency of Viewing Pornographic Materials on Video or DVD	222
Table 22	Percentages of Boys and Girls Reporting Viewing "Adult-Only" Shows on Specialty TV by Number of Platforms	223
Table 23	Percentages of Boys and Girls Reporting Viewing "Adult-Only" Shows on Specialty TV by Type of Platform	223
Table 24	Percentages of Boys and Girls Reporting Reasons for Avoiding Sexually Explicit Content on Video and DVD	225
Table 25	Percentages of Boys and Girls Reporting Reasons for Avoiding Sexually Explicit Content on the Internet	225
Table 26	Percentages of Girls and Boys Reporting Contexts for Viewing Sexually Explicit Material on Video or DVD and the Internet	229
Table 27	Percentages of Girls and Boys Reporting Social Contexts for Viewing Sexually Explicit Material on Video or DVD	230
Table 28	Percentages of Girls and Boys Reporting Social Contexts for Viewing Sexually Explicit Material on the Internet	230

Table 29	Means of Estimates for Number of Peers Who Have Viewed Sexually Explicit Content	231
Table 30	Percentages of Urban and Rural Participants Reporting a Variety of Media Platforms in the Home	233
Table 31	Percentages of Boys and Girls Reporting a Variety of Media Platforms in Bedrooms	235
Table 32	Percentages of Urban and Rural Participants Reporting a Variety of Media Platforms in Bedrooms	236
Table 33	Percentages for Boys and Girls Reporting Blocking Technology in the Home	238
Table 34	Percentages of Boys and Girls Reporting Parents' Content Area of Most Concern for Movies	240
Table 35	Percentages of Boys and Girls Reporting Parents' Area of Most Concern for Internet Content	241
Table 36	Percentages for Boys and Girls Agreeing "Adults Do a Good Job Explaining Why There are Certain Movies They Don't Want Me To Watch"	242

LIST OF FIGURES

Figure 1	An Ecological Model of Human Development	56
Figure 2	Bioecological Paradigm for Adolescent Use of Sexually Explicit Media	69
Figure 3	Hypothesized Causal Model for Adolescent Access to Sexually Explicit Media Content	75
Figure 4	Causal Model Depicting Significant Paths in the Ecosystem for Females	108
Figure 5	Causal Model Depicting Significant Paths in the Ecosystem for Males	109
Figure 6	Mesosystem Relationships that are Similar for Boys and Girls	113

Chapter I: INTRODUCTION

This thesis is a first step in describing access to sexually explicit media content in the home and community for adolescents in Alberta. This exploratory study was prompted by the lack of prior research on the topic and the need for information to guide parents, educators, health professionals, media industries and policy makers in attempts to help adolescents successfully navigate this aspect of their media- saturated environment. As a researcher, my interest in the topic grew out of working in the fields of adolescent sexual health and media regulation.

After working for several years as a consultant for the Government of Alberta on a panel that assigns age ratings to movies, I began to wonder about the extent to which children and adolescents are exposed to or gain access to media product intended for adults-- content that is restricted to them in theatres or by movie retailers-- and to what extent adolescents watch TV shows that have ratings indicating that the content is not intended for minors. Despite the immense potential for such information to inform the practice of media regulation, government media regulators have not researched these questions. Instead, they have worked on assumptions, rather than information, about the media used by the young people whom they seek to shield from content intended for adults.

Research is sparse about specific types of content that parents feel is appropriate for children at various stages of development. In Canada, government regulation of movie content has been based on "community standards" for tolerable levels of sexual and violent content, coarse language, and other types of content that may not be developmentally appropriate for children or may cause concern for parents. The concept

of the "community standard" is difficult to define or articulate, and few media regulators have made their own interpretation of the community standard explicit or supported it with research. Several film classification bodies, such as the British Board of Film Classification and the Australian Board of Film and Literature Classification have recently undertaken comprehensive programmes of research, reworking their guidelines for classification after conducting meaningful public consultation. At the time this thesis was submitted for publication, Alberta Film Classification had also initiated a limited programme of research around the community standard and was working to make its classification guidelines explicit.

The lack of information around what adolescents actually access and what citizens deem appropriate for them prompted a review of the research on adolescents as consumers of media, specifically around restricted product. As a media regulator, I wanted to know about the types of content that adolescents access at home and in the community, and whether government assigned age ratings had any relevance to their lived experience. The following questions began to guide my research: Were adolescents accessing much restricted media product? If so, how and where? What controls are in place in homes and communities to regulate access to restricted product and how effective are they? Was anyone benefiting economically from adolescents accessing such material? How do adolescents perceive enforcement of age ratings in the home and community?

I began researching these questions in a human ecology context—an ideal theoretical framework for investigating consumer issues while taking into account individual characteristics, family and social environments, and larger contextual factors

such as laws and policy. Research revealed that the literature did not address these questions. There was little literature on adolescents as media consumers, and even less on adolescents as consumers of restricted media product. There was a large body of research on children and frightening and violent media content; however, little research had been conducted around young people and sexual content and even less research existed on adolescents as consumers of sexually explicit media content.

The lack of information about adolescents and sexually explicit media was troubling to me as someone with a keen interest in adolescent sexual development and health. Before becoming a film classifier, I had worked extensively in areas of adolescent sexual health education. These work environments included a peer education program for university students, a community based not for profit HIV prevention and support organization, a stint as a sexual health consultant for a provincial health region in rural Alberta, teaching health and life skills in the public school system, and preservice teacher training in teaching sex education. Looking back on these experiences, I realized that adolescent use of pornography had never been part of the discourse. Considering the power that the media has as a socializing agent, and the very high rates of media use among adolescents, it became apparent to me that researching adolescent use of pornography would provide a starting place to bring its role in the lives of adolescents into discussions about sexual health.

I began to wonder how parents feel about their adolescent children's access to pornography and to what degree it is acknowledged, discussed, or otherwise mediated. Today's parents are the first generation that has parented in a media saturated environment, and few supports are available around media management as a parenting

skill. Parents continue to create home environments saturated with electronic entertainment media, and adolescents spend a majority of their leisure time engaged with screens. Parents are worried about the amount of sexual content their children access, yet they are often unaware of what their children are exposed to or seek out on media in the home and in friends' homes. A study on the topic could make parents more aware of the types of media content their children access and offer some indications about ways they could provide appropriate and effective mediation and guidance.

Findings about adolescent use of pornography have implications for those with an interest in the wellbeing of children and adolescents—parents, educators, the public health sector, media regulators, and media industries. The lack of information in this area has allowed each of these stakeholders to continue to make assumptions and ignore this aspect of adolescent media use and sexual socialization.

Thus, an exploratory study, the *Adolescents and Restricted Media Study* (Thompson, 2003), was conducted to begin to begin to collect information on the topic. An anonymous questionnaire was administered with 429 grade eight students across Alberta. The questionnaire allowed the grade eight students to anonymously report on their use of such materials without risking censure. Questions were asked about their use of restricted media, about parent, home, and individual characteristics, and, information was gathered on their use of restricted mainstream movie content as well as their use of or passive exposure to pornography, to provide crude baseline measurements for both areas. However, this thesis focuses only on adolescents' use of and exposure to sexually explicit media, as this is an area in the literature where the need for information is greatest.

The nature of contemporary pornography is not discussed in the thesis, but the range of sexual practices and depictions of human sexuality in the genre are available to the reader via a click of the computer mouse on a search term using the words "sex" or "porn", by a stroll through an adult video retailer, or time spent watching an adult movie channel. I invite the reader to do his or her own investigation into the conventions of the genre with no outside guidance, and consider how this experience would be different for them if they were 13 or 14 years old without an adult context for the images that they encounter. Conventions of note in contemporary pornography include the subservient role of women, unprotected sexual activity, sexual activity marketed as a product, and extreme and theatrical depictions of sexual activity.

Use of term "sexually explicit" was chosen for this review because although not all sexually explicit media content is pornographic in nature, this term is a value-neutral way of avoiding the emotionally and morally loaded, highly subjective debate around the distinctions between terms such as "erotica" and "pornography". Some sex educational media content is explicit in nature, but this type of programming comprises a very small segment of sexually explicit content on electronic and digital entertainment media.

The questionnaire items that asked adolescents about their use of and exposure to sexually explicit media content did use the term "pornography" for simplicity, and pornographic movies were defined for the respondents as movies with very simplistic storylines, or no story at all, mostly showing people having sex. Pornographic Internet content was not defined—it was assumed that by grade eight most adolescents would have an idea what Internet pornography was.

The findings in this thesis represent the most comprehensive collection of data amassed to date on the ways that adolescents are exposed to or seek out sexually explicit content on the entertainment media in their homes and communities. The introduction is followed by a review of the literature that encompasses the following areas: use of sexually explicit media by adolescents; social contexts for this use; a public health perspective on links between sexual media and adolescent sexual health; moral, psychological, and behavioural effects of sexually explicit media content on adolescents; the functions of sexually explicit content for adolescents; mediation of adolescent access to sexually explicit media through parenting and policy; and, areas for future research.

Chapter two presents a discussion on the human ecological theoretical framework and its suitability to this study, and the study purposes and hypotheses are presented. Chapter three describes the research methods used. Chapter four describes the sample and the procedure for data analysis and moves into a presentation of the results, including the test of the causal model for adolescent access to sexually explicit content. Chapter five is a discussion of the major findings, including findings consistent with the literature and new contributions to the literature, as well as implications for adolescents, parents, health professionals, and government and industry media regulators.

Chapter II: REVIEW OF THE LITERATURE

Adolescents in the developed world spend a majority of their leisure time interacting with electronic entertainment media (UNESCO, 2004). The contemporary electronic entertainment media environment (which includes the Internet, satellite, digital, and various forms of pay-per-view television, DVD and video) presents potentially unlimited avenues for accessing sexually explicit content. The opportunities for access to sexually explicit content provided by the rapidly expanding media environment of adolescents (Walsh, 2000) have generated concern and speculation about how much pornography adolescents access and how it affects them (Livingstone, 2003; Villani, 2001). However, little is known about adolescents' experiences of accessing sexually explicit content, about the social, family, and community contexts for their access to sexually explicit content, and what the outcomes of this exposure are for adolescent sexual development.

This review presents a brief overview of the contemporary electronic entertainment environment and the scope of the sexually explicit media industries. Then, an overview of research with adolescents about the extent of their use of and access to sexual media content is presented, followed by findings on the social contexts of this use. A summary of the research on the effects of sexual media on adolescent sexual health and development is presented. Then, the role that sexually explicit media content plays for adolescents on an individual level is discussed, followed by an overview of the research on parental mediation, and government and industry regulation of sexually explicit content.

In this review, the terms "sexually explicit" media content and "pornography" are used interchangeably to signify still and moving images of people engaged in explicit sexual activity or sexualized displays of nudity that include genitalia. The term "sexually explicit" media content is a descriptive and value neutral term for this type of material, but "pornography" is the term used in popular culture to refer to this type of material. Recognizing ambiguities in definitions of "pornographic" materials, a committee formed through the National Research Council in the U.S. to study approaches to protect minors from such materials chose to use the term "sexually explicit materials" to define textual, visual, or aural material that depicts sexual behaviour or acts, or that expose genitalia, and they state that they use the term in many places where the term "pornography" would be understood the same way—to refer to media containing erotic or sexual imagery or words for arousal, entertainment, or social or sexual activities.

Information about adolescent use of, and access to, explicit sexual content in electronic media could have profound implications for an increased understanding of adolescent sociosexual development, gaps in sexuality education, awareness and mediation skills for parents, and the formation of policy to protect minors from harmful content. Therefore, the review concludes by identifying areas for future research to support healthy sexual development for adolescents.

Media Environment of Canadian Adolescents

The media environment of Canadian adolescents is similar to that of adolescents throughout the developed world—simply put, it is saturated with electronic entertainment media. A recent study on media use in the home with over 5000 Canadian children between nine and fifteen years of age found that 96% had VCRs in their home and 65%

have DVD players. Nearly half had a television in their bedroom and 35% of them also had a VCR, and 19% a DVD player in the bedroom and 26% had a computer with an Internet connection for their personal use. Television use is a daily activity for 75% of children, and 59% of Canadian children aged 12- 16 used video or DVD from several times a week to every day (Canadian Teachers' Federation, 2003). Canadian children watch copious amounts of TV—the average teenager will have spent more time watching TV than in the classroom.

The numbers and types of media platforms in Canadian homes are rapidly increasing as Canadians continue to adopt new technology. Nearly three quarters of single-family households with children under the age of 18 had Internet access in the home, the highest rate of any household type (Statistics Canada, 2003). In the first few years of the 21st century, there has been a dramatic increase in Canadian homes accessing specialty TV, as 45 digital TV services became available by 2003 and the direct-to-home (satellite) TV market saw an annual increase of 80% each year from 1999 to 2003. Video and DVD rentals and sales continue to grow even with the advent of movies on digital television channels, with total Canadian revenues for video and DVD at $3.4 billion in 2003 (Statistics Canada, 2005). As the specialty television and DVD industries continue to grow, little information is available about adolescent use of these media.

Sexually Explicit Content in the Media Environment

Canadian adolescents are surrounded by electronic media, and Alberta adolescents have some of the highest rates of use of electronic entertainment media in North America (Statistics Canada, 2001, 2003). They spend a majority of their leisure time using it, and report little parental involvement in their media use. With the

proliferation of new technologies, contemporary adolescents live in a constantly changing and expanding media environment, an environment in which restricted media content is pervasively and aggressively marketed to them (Federal Trade Commission, 1999). Given that children and youth are dominant consumers force in the Canadian media marketplace, controlling in excess of $20 billion of discretionary spending (YTV Tween Report, 2002), it is surprising that so little research has been conducted to investigate their use of and access to sexual media content and whether there is an economic benefit to media industries from their use of sexually explicit media.

Profits from adult pay per view are essential to recapturing the tremendous costs to private companies of building the digital capacity of specialty TV technologies, and North American cable and satellite providers are expected to grow their adult channel revenue by 120% by 2009 (McConnell, 2005). As new and increasingly interactive media platforms continue to be adopted into households, and societal tolerance for sexually explicit material in the media has increased (Thornburgh & Lin, 2002), increasing amounts of sexually explicit content continue to move into the mainstream (Brown & Cantor, 2000) and into the purview of young people.

The pornography industry has changed the content environment of the global media landscape and has become a significant market force in entertainment media. France, for example, is a world leader in televised pornography, with over 900 pornographic movies broadcast on cable television each month (LeVern, 2004), and pornographic titles accounting for about one third of French movie rentals (Henley, 2002).

Pornography on the Internet is at record levels. In 2004 more than 1.6 million adult web pages were in existence, 18 times more than in 2000 (Luscombe, 2004). Pornography continues to drive new technologies (Kuzma, 2005); revenues from pornography distributed via cellular phones were estimated at about $30 million last year in the U.S. Analysts expect that pornography distributed over mobile phones will generate about $2 billion in global revenue by 2009 (Brown, 2006). In Western Europe, video on cell phones outsells printed material, and by 2004 became the fourth-largest source of revenue for the pornography industry (after pay-per-view and subscription television, home videos and the Internet) (Financial Mirror, 2005).

Few reliable figures are available about the scope of the pornography industry in North America. It is estimated that the pornography industry generates $57 billion globally annually. In the U.S. the estimated $12 billion annual revenue from pornography exceeds the combined revenues of ABC, CBS and NBC television networks ($6.2 billion), and also that of all professional football, baseball and basketball franchises put together. Adult videos and DVDs are a $20 billion per year industry in the US (Johnston, 2004). Over 200 new pornographic films were produced in the U.S. every week in 2003, far surpassing Hollywood's output (Campbell, 2003). In 2004, 800 million "adult movies" on DVD and video were sold or rented in the U.S. (Luscombe, 2004). Pornography broadcast on cable and pay per view is a $2.5 billion per year industry in the US. A large survey found that 84% of American men who use the Internet pursue sex-related activities online, as do 16% of women. Americans spent $220 million on fee-paying adult websites in 2001 (Johnston, 2004).The US is the biggest consumer of pornography in the word and the biggest exporter to Canada (Einseidel, 1988). Figures

for the contemporary Canadian pornography industry are not available, but the most current estimates indicate that Canadians spent roughly $500 million on pornographic movies, videos and magazines in the year 2000 (Hendley). Given that time has elapsed since these figures were generated, it is safe to assume that current figures are much higher. No figures are available about Canadian spending on Internet pornography.

Considering the hundreds of channels on specialty television services and limitless content on the Internet, it is a given that pornographic products produced in the US and elsewhere are consumed in Canada. Clearly, as part of the consumer base for the global pornography industry, a significant amount of sexually explicit media is being consumed in Canadian homes. What is not known is the degree to which adolescents comprise a segment of this consumer base or are unintentionally exposed to such media product.

Adolescent Use of Sexually Explicit Media

Research on the use of sexually explicit materials by minors and the contexts of this use is scarce. A comprehensive review of research from the fields of paediatrics, developmental and educational psychology, health promotion, sexology, sociology, anthropology and cultural studies, media studies, and by government and other public institutions reveals that there is little comprehensive, current information on adolescent access to, or uses of, sexually explicit media in Canada (or elsewhere). There is no current information about adolescent access to or use of sexually explicit content on media other than the Internet in the North America. Studies with large, generalizable samples are few and far between, and comparison of data over time is impossible due to differences in instruments and methodologies and changes in the media environment.

Some of the most thorough research on adolescent use of sexually explicit media was done in the late 1960's and early 1970's; a US government commission was formed, in part, to study "the effect of obscenity and pornography upon the public, particularly minors…" (Commission on Obscenity and Pornography, 1970, p.1). Prior to the establishment of the Commission, there was no existing information on minors' use of or access to sexually explicit media (1970). Consequently, ten studies investigating adolescent use of sexually explicit media were funded by the Commission in 1968 (Abelson et al, 1970; Berger, Gagnon, & Simon, 1970a; Berger, Gagnon, & Simon, 1970b; Elias, 1970; Fersch, 1970; Goldstein & Kant, 1970; Propper, 1970; Roach & Kreisberg, 1970; White, 1970) and findings were released in 1970 (Commission on Obscenity and Pornography, 1970).

Results from all ten studies were consistent. Based on the findings, the Commission came to several conclusions. The Commission found that "minors report considerably more exposure to erotica than do adults in general…however, the experience of minors (with such materials) is similar to that of adults who are nearest them in age, the 21-29 year olds" (Commission on Obscenity and Pornography, 1970, p.153).

The Commission's key findings are summarized here in their entirety because they are the first, and to date the most comprehensive, findings about adolescent use of and access to sexually explicit media:

> There is considerable exposure to sexually explicit materials on the part of minors. We may conservatively estimate from all these figures that 80% of boys and 70% of girls have seen visual depictions… of sexual intercourse

> by the time they reach age 18. Substantial proportions of adolescents have had more than an isolated exposure or two, although rates of exposure do not indicate an obsession with erotic materials. A great deal of exposure to explicit sexual materials occurs in the preadolescent and early adolescent years. More than half the boys appear to have exposure to explicit material by age 15. Exposure on the part of girls lags behind by a year or two. Exposure to genitals and heterosexual intercourse occurs earlier and more often. Exposure to oral-genital and homosexual materials occurs later and less frequently. Experience with depictions of sadomasochistic materials is much rarer, although it does occur.
>
> (Commission on Obscenity and Pornography, 1970, p.155)

The findings from this early research normalized adolescent exposure to sexually explicit magazines as an ubiquitous part of coming of age sexually. The following section of the review provides a comparison of available contemporary research findings on adolescent access to sexually explicit media in the developed nations in North America, Europe, Australia, and South Asia.

Rates of Adolescent Exposure to Sexually Explicit Content

Exposure to sexually explicit content appears to be a common experience for contemporary adolescents. Findings from studies with adolescents about their use of sexually explicit media content were available for developed nations on four continents (see Tables 1 and 2). Comparisons across the data are difficult to make because few are from the same country (media environments differ regionally), researchers used differing methods of data collection and phrased their questions differently, different researchers

asked about different media platforms, and the age ranges of the samples varied. The most common methods for gathering data were telephone interviews and self completed questionnaires done at home, in a classroom setting, or online. Some researchers, particularly those using telephone interviews, expressed that adolescent self-reports may be low due to concerns about anonymity (Flood & Hamilton, 2003; Mitchell et al, 2001).

In many cases the data are not specifically organized to indicate gender or age differences, or even details about methodology. When they are presented, gender and age differences are important, with boys and older teens reporting more frequent exposure and more deliberate seeking out of sexually explicit content.

The Internet appears to be the medium on which sexually explicit material is accessed most frequently, although high rates of access to sexually explicit content on specialty television were reported by adolescents from France, Sweden and the UK. Australian boys had extremely high rates of viewing sexually explicit video and DVD.

Most Internet pornography is viewed unintentionally, and this exposure appears to be most commonly experienced through searching and unsolicited email (Environics, 2001; Flood & Hamilton, 2003; Livingstone & Bober, 2005). Pop-ups are more common sources of unintended exposure in the UK and Australia, but the data are more recent than the other studies which may indicate a recent increase in the use of pop-ups to distribute pornography. In one sample (Mitchell et al, 2003), 7% of respondents reported unwanted exposure to sexually violent images.

No information was available about Canadian adolescent access to sexually explicit content on media other than the Internet. From the available studies, given the limitations for comparison of results, Canadian children (aged 10-19) appear to have

among the highest self-reported rates of deliberate seeking out of pornographic material online (almost one third), although overall exposure to sexually explicit Internet content for the entire sample (at around 50%) is lower than other countries, which may indicate less accidental exposure. Nearly half of the Canadian sample reported never having experienced accidental exposure, but 9% have visited a pornographic website by accident more than five times. Patterns of age and gender reflect those from other studies, with older boys more likely to experience sexually explicit content and with more frequency. Boys in secondary school, those who did not have a parent who is a college or university graduate, and those who use the Internet more frequently at home were more likely to have high rates of accidental and deliberate exposure.

Like their counterparts in other countries, accidental exposure occurred most commonly while searching for something (60%), or through unsolicited pornographic emails or instant messages (30%). A majority (70%) who had experienced unwanted exposure told someone about the experience (usually a peer). Boys were less likely to tell someone, and youth in Alberta (compared to cohorts from other provinces) and those in elementary school were more likely to tell someone about unintended exposure (Environics, 2001).

Table 1. *Reported Rates of Adolescent Exposure to Sexually Explicit Internet Content by Country.*

Country	Ages of Sample	Method	Unintended Exposure	Deliberate Exposure	Unattributed Exposure	Reference
Taiwan (N=2001)	13-17	self-completed questionnaires			Boys 56% Girls 20% Overall 38%	Lo & Wei, 2005
Singapore (N=1,124)	secondary students	Web-based questionnaire			66%	PAGI, 2004
Singapore (N=1,000)	13-16				30%	Kuo et al, 2002
Australia (N=200)	16-17	telephone interviews	Boys 84% Girls 60%	Boys 38 % Girls 2%		Flood & Hamilton, 2003
Australia (N=502)	8-13	telephone interviews			Boys 23% Girls 15%	Australian Broadcasting Authority, 2005
(N=4700)	9-16	self-completed questionnaires		16% of 13-16 year olds		SAFT, 2003
Ireland			37%			
Denmark			52%			
Iceland			51%			
Sweden (N=718)	x=18	self-completed questionnaires			Boys 98% Girls 72%	Haggstrom-Nordin et al, 2005*
UK (N=1511)	9-19	self-completed questionnaires	21% of 9-11 year olds, 58% of 12-15 year olds	7% of 12-15 year olds, 15% of 16-17 year olds	76% of 16 and 17 year olds	Livingstone & Bober, 2004
US (N=1501)	10-17	telephone interviews	15% of 10-13 year olds, 45% of 14-17 year olds	8%		Mitchell et al, 2001
US (N=625)	14-17	Telephone interviews			45%	NPR, 1999
US (N=1209)	15-17	Telephone interviews			70%	Rideout, 2001
Canada (N=5,682)	9-17	self-completed questionnaires	52%	26%		Environics, 2001

**Authors reported combined rates of exposure on Internet and Specialty TV services.*

Table 2. *Reported Rates of Adolescent Exposure to Sexually Explicit Content on Media other than the Internet by Country.*

Country	Ages of Sample	Method	Specialty TV	Video/DVD	Magazines	Reference
France*	16-17	Not specified	Boys 90% Girls 81%			Le Vern, 2005
	4-11		12% had seen one minute of pornographic TV content in previous year, 6% had seen at least 20 minutes in past year			
Sweden (N=718)	x=18	Self-completed questionnaires	98% of males, 72% of females had watched sexually explicit content on Specialty TV or Internet			Haggstrom-Nordin et al, 2005*
UK (N=1511)	9-19	Self-completed questionnaires	52%	30%	46%	Livingstone & Bober, 2004
Australia (N=200)	16-17	Telephone interviews		Boys 73%, Girls 11%		Flood & Hamilton, 2003
US (N=1501)		Telephone interviews, parent interview prior to child interview	7% of sample reported deliberate seeking of pornographic magazines, video/DVD, and cable***			Ybarra & Mitchell, 2005
Taiwan (N=2001)	13-17	Self-completed questionnaires	Boys 25% Girls 11%			Lo & Wei, 2005

* Sample size was not available.
** Authors reported combined rates of exposure on Internet and Specialty TV services.
*** Authors did not specify rates for each medium.

The Internet has garnered more attention from researchers than any other media platform, and this is not surprising considering the medium's increasing ubiquity in homes and its limitless potential for content choices (and potential for unintended exposure to explicit content). This review makes it clear that the post-video age has arrived, yet we know little about how adolescents use the various television and video media in their homes and communities to access sexually explicit content, and little is known about the frequency and contexts of their exposure to such material on the Internet.

Social Contexts for Adolescent Use of and Exposure to Sexually Explicit Media

The 1970 *Report of the Commission on Obscenity and Pornography* concluded that, for adolescents using sexually explicit media, the experience seems to be more a social than a sexual one. A 1973 study by Berger, Simon, and Gagnon found that "pornography is an element in a total picture of media consumption, and like other media, is consumed in proportion to the social position of the consumer" (p.279), implying that the more social interaction an adolescent has, the more sexually explicit media he or she will be exposed to. Their findings are summarized as follows: "The data indicate that higher degrees of participation in friendship networks are related to higher levels of exposure to sexually explicit media" (Berger, Simon, & Gagnon, 1973, p.159). The Commission concluded that "young people rarely purchase sexually explicit materials; most of their exposure comes in a social situation where materials are freely passed around among friends" (Commission on Obscenity and Pornography, 1970, p.156-7). In this early research, friends were consistently found to be the predominant source of sexually explicit media (Abelson et al, 1970; Berger, Gagnon, & Simon,

1970b; Fersch, 1970; Propper, 1970), although nearly half of respondents in one sample reported finding sexually explicit materials hidden in the home (Elias, 1970). More recently, a Canadian study found that many of the restricted movies that adolescents watched were already in the home or have been rented by older siblings, friends, and parents (Canadian Teachers' Federation, 2003). French teenagers who had seen sexually explicit specialty TV content reported that most of their viewing had taken place at home or in friends' homes while parents were out or sleeping (LeVern, 2004). A majority (83%) of older Swedish adolescents who had accessed pornographic materials had done so in their own homes (Haggstrom-Nordin et al, 2005).

A majority of Australian 16 and 17 year old boys who had seen sexually explicit video or DVD reported being exposed to such content for the first time through the encouragement of friends, usually male peers. Typically, girls had watched with a boyfriend (Flood & Hamilton, 2003). This study found that boys tended to overestimate the amount of use of sexually explicit content by their female peers, but both boys and girls accurately believe the practice is widespread among boys.

Receiving sexual content via email or instant messenger is a way for adolescents to share pornographic video or images consensually but it is also a major source of unintended and unwanted exposure to such content, and it may play a role in intentional sexual harassment of peers. American adolescents reported that one-third of unwanted exposures to sexually explicit content were through emails (Mitchell, Finkelhor, & Wolak, 2003). One quarter of Canadian 10-17 year olds reported having received pornography that had been sent to them (Environics, 2002), and 9% of the sample in a

large British study had received electronic pornography from someone they know (Livingstone & Bober, 2005).

Drawing on the very limited literature on social contexts for adolescent use of sexually explicit media, it appears that using sexually explicit media content is a shared experience, particularly for boys-- friends are often the initiators of other adolescents' experiences with sexually explicit content. Friends and sexual materials already in the home appear to be a significant source of such materials. Sexually explicit content appears to have social currency (for its eroticism and/or shock value), given that a minority of adolescents report emailing to or receiving sexual content from peers.

The limited findings around prevalence of and contexts for adolescent use of sexually explicit media content suggest that it plays a role in the sexual socialization of adolescents. However, the nature of this role—how sexually explicit content affects their health, their moral and psychological development, and how it functions for them on an individual level—is an area that has not been thoroughly researched. The next section addresses the effects and functions of sexually explicit content in the lives of adolescents.

Links Between Sexual Media and Adolescent Sexual Health—
A Public Health Perspective

A review of decades of research on media effects finds that the primary effects of media exposure on adolescents include increased violent and aggressive behaviour, increased high-risk behaviours, such as alcohol and tobacco use, and some indication that exposure to highly sexualized content may contribute to accelerated onset of sexual activity (Villani, 2001). Although numerous studies have found evidence of effects of media on various behaviours, the systematic process of examining sexual content in the

media and its impact on adolescent behaviours is in its infancy and findings are not always consistent (Escobar-Chaves, 2005). In addition, conclusions about the sexual behavioural effects of the media on young people have largely been based on studies of adolescent consumption of sexual (but not sexually *explicit*) media, and based almost exclusively on television content (see Brown, Steele, & Walsh-Childers, 2002; Monge et al, 1977; Spanier, 1977; Kallen, Stephenson, et al. 1983; Strouse & Fabes, 1985; Bereska, 1994; Brown & Steele, 1994; Wacker & Daley, 1994; Edwards, 1995; McKay & Holowaty, 1997; Mosse, 1996; Steele, 1999; Brown, 2000). The distinction between the sexual content on mainstream broadcast television and in movies compared to sexually explicit content on adult movie channels, pornographic websites and specialty TV channels is important. These types of content vary greatly in terms of suggestive content versus explicit content.

Adolescents whose television diet was high in sexual content were more likely to overestimate the number of their peers who are having sex and to feel more pressure from the media to begin having sex (Kunkel et al, 1999; Brown & Newcomer, 1991; Kaiser Family Foundation, 1996; Ward & Rivadeneyra, 1999). And, adolescents with television diets high in sexual content engage in more frequent sexual activity and with more partners (Brown, 2002; Brown, Childers, & Waszak, 1990; Brown & Newcomer, 1991; Brown & Witherspoon, 2002).

The research that has found correlational links between a television diet high in sexual content and adolescent sexual activity does not provide conclusive evidence about the causal nature of the relationship between interest in sexual media content and sexual experience; it has also been reported that young people who are more sexually

experienced seek out more sexual content than their sexually inexperienced counterparts (Escobar-Chaves, 2005).

There is some evidence for a causal relationship between high exposure to sexualized media content and earlier adolescent sexual initiation and a faster progression to non-coital sexual activity. A longitudinal study with a large sample of adolescents in the 90th percentile and above on a measure for watching sexualized television content behaved, sexually, as though they were 9 to 17 months older (Collins et al, 2004).

Research has not kept pace with the growth of the media environment. In addition to a lack of research that would present a baseline for rates of adolescent exposure to sexually explicit media, no research has examined the effects on Internet use on adolescent sexual attitudes and behaviours, and no studies to date have examined the cumulative effects of multiple media exposure or the pattern of exposures on adolescent sexual behaviours (Escobar-Chaves et al, 2005). The time lapse between data collection and research publication means that even the most "current" literature on adolescent use of sexually explicit media must be analyzed in its historical context. Because of the dynamic nature of the contemporary media environment, recent publications only provide a snapshot of behaviours reported a period of years ago and may not reflect current patterns of use.

A decade prior to this review, young teenagers ranked entertainment media as the leading source of information about sexuality and sexual health in US (Kaiser Family Foundation, 1996). This is problematic because media portrayals of sexual activity present adolescents with unrealistic role modeling of negative consequences of sexual behaviours. Researchers have found that, while teenagers in the US did not learn about

STD through media, in Western Europe they seemed to get a more realistic idea about risk and sex through the media (Brown and Witherspoon, 2002). Although there is more sexual content in the mainstream media then ever before (Escobar-Chaves, 2005; Kunkel et al, 2003, 2005), Canadian youth knowledge about sexual health has decreased between 1989 and 2002 (Council of Ministers of Education, 2003).

The effects of sexual media content on adolescent sexual health are not known, but there is a consensus among researchers that there is a correlational relationship between levels of sexual content in media diets and sexual activity. However, this body of research may have ignored other influences on adolescent sexual health outcomes, focusing instead on the role of the media in health outcomes for US teenagers. The research agenda appears to reflect the position of the American Academy of Pediatrics that the media is "the most easily remediable influence on young people and their sexual attitudes and behaviors" (American Academy of Pediatrics, 2001).

A small number of researchers posit that guidance around sexual values and behaviours from parents, educators, and peers. Instead, they assert that information, education, and parental guidance are more important than restricitng adolescent access to sexual media content and that exposure to sexual content is not enough to outweigh these positive social influences (Brown & Witherspoon, 2002; Heins, 2001; Huston, Wartella, & Donnerstein, 1998).

According to the medical literature, the major factors underlying poor sexual health outcomes for adolescents are inadequate promotion of sexual health and social, economic, and educational equality (Singh et al, 2001; Alan Guttmacher Institute, 2001). The sexual health literature acknowledges the constant presence of sexualized images in

Western countries and the pressure that sexualized media creates on adolescents to have sexual relationships.

Although sexualized media is ubiquitous throughout the developed world, and levels of teenage sexual activity are comparable, poor sexual health outcomes for adolescents in the U.S. are uniquely prevalent (Guttmacher Institute, 2001). The sexual health literature attributes the variation in health outcomes to sources other than exposure to sexualized media, including the failure to implement comprehensive sexual health education programs to teach adolescents how to combat pressure to have sexual relationships and protect themselves from adverse consequences. This failure may be founded on "the ill founded but powerful sentiment" (Skinner & Hickey, 2003, p.159) that the comprehensive sexual health education of children and young adolescents will promote earlier sexual activity.

Yet, countries such as the United States, Australia and the UK have not implemented comprehensive sexual health programs (Skinner & Hickey, 2003). European countries such as the Netherlands, France, and Germany have dramatically lower rates of teen pregnancy than the United States, Australia and the UK (Singh et al, 2001). Governments in the Netherlands, France, and Germany (as well as those in Scandinavian nations) have been proactive on a societal level for decades with comprehensive sexual health education in schools, publicly funded sexual health services for adolescents, social policies, and mass media sexual health promotion campaigns (Berne & Huberman, 1999).

It is of note that Canada's sexual health policies are similar to, but not as comprehensive as, policies in most Western and Northern European nations. However,

sexual health indicators for Canadian youth, such as age of first intercourse and teenage pregnancy rates, are similar to, though not as poor as, those of American adolescents (Maticka-Tyndale et al, 2000). The majority of media channels broadcast into Canadian homes originate in the US, and the US is an anomaly among developed countries for the reluctance of its media distributors to promote sexual health, even through condom advertising. This is due largely to fear of backlash and boycotting by conservative forces, in contrast to countries such as the Netherlands where mass media campaigns are endorsed by the government as powerful strategies that keep sexual health on the public agenda, reduce stigma, educate, start discussions, and reach high risk groups (Berne & Huberman, 1999).

Exposure to sexual media content is one of many factors affecting the sexual health of Western adolescents. There is evidence that sexual messages in the media can be positive and negative influences. Although there is ample evidence that sex educational messages in the mass media can have a positive effect on sexual health in combination with other strategies, there is little literature that convincingly demonstrates the negative effects on adolescent sexual health of sexual content in the mass media. Unfortunately, even less is known about the possible effects of exposure to sexually explicit content on adolescent sexual health or about the relationships between exposure to sexually explicit media, other societal factors, and sexual health outcomes for adolescents. The following section of the review will examine the literature on how sexually explicit content affects adolescent sexual development.

Moral, Psychological, and Behavioural Effects of Sexually Explicit Media Content on Adolescents

Effects of sexually explicit content are difficult to measure. The body of literature in this area is too small to address differences in effects among such factors as voluntary and involuntary exposure, the nature of the content (such as violent pornography versus consensual sex acts, or unconventional sexual practices), the effects of frequency of use of pornographic material, or the role of an adolescent's experiences, values, and beliefs in the outcomes from exposure to sexually explicit content.

The possibility for sexually explicit content to cause moral harm to young people is widely assumed in American culture. For example, a 1997 US Supreme Court decision stated that establishing harm to children from pornography did not require proof because concerns about youthful exposure to such material are based on commonly held moral views about the upbringing of children (Heins, 2001). This assumption of moral harm has traditionally guided regulators (see last section of this review), however, there is not adequate scientific research to prove that sexually explicit media is harmful to adolescents in any way (Heins, 2001). Both British and American health and psychology professionals have been surveyed to test for a consensus around harm to minors from sexually explicit media. The British authors found consensus among these professionals that pornography "is not helpful" to child development (Cragg Ross Dawson, 2000), but had no empirical evidence of harm. The US authors indicated that most scholars in the field of sexuality agree that there is no basis to believe that sexually explicit words or images cause psychological harm to the great majority of young people (Heins, 2001).

There is evidence of short-term negative emotional effects from unwanted exposure, a type of exposure common to Internet users (Mitchell, Finkelhor, & Wolak, 2003). About one quarter of 10 to 17 year olds in the U.S. who had experienced unwanted exposure to pornography online reported being very or extremely upset by the incident. However, the authors concluded that over the short term exposure was not typically harmful. Interestingly, they also found that a small percentage of the sample reported being upset by their own deliberate exposure to sexual material online. A UK study found that just over half of 9 to19 year olds who are regular Internet users claimed not to be bothered by unintended exposure to pornography, and just over one quarter reported being disgusted (Livingstone & Bober, 2004). The authors also found that younger children were less likely to encounter sexually explicit material online, but were more likely to be upset by it when they do. The same study found that nearly half of 18 and 19-year-old Internet users who had seen pornography (online or offline) now think they were too young to see it when they did.

Swedish researchers have found that teenagers believe that using pornography is more likely to affect other people's sexual behaviour than their own (Haggstrom-Nordin et al, 2005). The researchers also found a dramatic increase in the number of high school students engaging in anal sex, which the researchers attribute to modeling from pornography, as the rates of anal sex were highest among heavy users of sexually explicit Internet and specialty TV content. Taiwanese researchers found a correlation between teenagers' use of Internet pornography and sexually permissive attitudes, and limited evidence that these attitudes result in sexually permissive behaviour (Lo & Wei, 2005).

Many of the research findings on effects of sexually explicit media on adolescents are inferential, with conclusions drawn from retrospective studies with college students (Linz, Wilson, & Donnerstein, 1992; Tjaden, 1988; Duncan, 1990; Duncan & Donnely, 1991; Duncan & Nicholson, 1993), or findings from clinical samples, such as sex offenders (Becker & Stein, 1991; Marshall, 1988). Inferences about effects of sexually explicit media are made from extensions of hypotheses about non-explicit media. However, some scholars assert that these studies have limited relevance to pornography, which is a markedly different genre from mainstream entertainment, with different imagery, messages, and purposes (Heins, 2001). In addition, very little recent research has been done on adolescent exposure to sexually explicit content in media other than the Internet, so the body of literature does not adequately reflect the experience of adolescents in their contemporary media environment.

Until more is known about the extent to which adolescents access sexually explicit media and how it affects them "a highly uninformed and hence counterproductive debate over the effects of erotica on youth is bound to be perpetuated" (Zillman, 2000, p.42). More research on how sexually explicit content functions for adolescents—why they use it—will help to inform that debate. The next section discusses the literature on research done with adolescents to investigate how it functions for them.

Functions of Sexually Explicit Content for Adolescents

Little is known about how sexually explicit content functions for adolescents or why or how they use it. Researchers point to ethical considerations to explain the lack of research. Experimental research in this area is impossible given the ethical constraints

around having minors view material they are prohibited by law from accessing. In addition, increasing conservatism of funding bodies and difficulties with investigating a morally sensitive and potentially harmful area are factors that undermine research efforts (Thornburgh & Lin, 2002; Heins, 2001; Donnerstein et al, 1992; Huston et al, 1998), complicating the existing challenge of studying children's behaviours within the privacy of the home (Livingstone, 2003).

The use of sexually explicit media by adolescents is not portrayed in the literature as a sexual activity per se. This is reflected in the absence of the mention of sexually explicit media in "comprehensive" surveys of adolescent sexual activity in Canada and the U.S. (Herold, 1984; King et al, 1988; Health and Welfare Canada, 1990; Bancroft & Reinisch (Eds.), 1990; SIECUS, 1994; Chilman, 1978) or in reviews of the literature on psychosexual development in adolescence (Green, 1985; Storms, 1981; Miller & Simon 1980; Martinson, 1976; Elias & Gebhard, 1969; Ramsey, 1943a, 1943, b). Although consuming sexually explicit media is not generally reflected in the literature along with other adolescent behaviours as a sexual act, Sorensen (1973), Hass (1979), and sexologists Kirkendall and McBride (1990) found that sexually explicit media played a limited role for adolescents in masturbatory activity, in fantasy and in learning about sexual techniques.

Adolescents meet some of their social and emotional developmental needs through the media content choices they make (Huston, Wartella, & Donnerstein, 1998; Arnett, 1995; Steele& Brown, 1995; Mander, 1983). The avoidance of negative outcomes is only part of a comprehensive picture of adolescent sexual health, which also includes positive

outcomes such as non-exploitive sexual satisfaction and rewarding relationships (Health Canada, 2003). Sexually explicit content may help adolescents meet such positive needs.

In his 1979 study *Teenage Sexuality: A Survey of Teenage Sexual Behavior*, Hass surveyed a sample of 625 15 to 18 year olds, equally distributed by gender. Hass's study is important because documents adolescents' own words to describe their range of experiences with sexual images. Hass asked open-ended questions and respondents provide him with descriptions of a wide range of experiences with and responses to sexually explicit media. These include: becoming aroused; satisfying curiosity; satisfying a need for information about how to have sex; learning about the anatomy and preferences of the opposite sex; lessening anxiety about sex; making normative comparisons of their bodies with others'; the excitement of breaking the taboo of engaging with erotica; gaining social stature with peers; engaging in fantasy and having vicarious pleasure; mentally placing themselves in the erotic scenario; feeling that the material is far out of their frame of reference; realizing that they will never look like the models do or will never have a partner like the models; feelings of embarrassment when viewing with others, especially parents; feelings of anxiety about partner's expectations while or after viewing; embarrassment at their own arousal; feeling upset at the objectification of women, that the sex is mechanical or "perverted"; and feeling bored. This comprehensive list illustrates the wide range of adolescents' experience with sexually explicit media, and it is the only qualitative investigation asking adolescents directly about the nature of their experience. Hass found that teenagers rarely have opportunities to discuss these experiences.

The 1970 Commission on Obscenity and Pornography found sexually explicit media to be an important source of sex information. Based on findings from interviews with sexuality educators the Commission stated: "if adolescents had access to adequate information about sex… their interest in pornography would be reduced" (1970, p.33). Hass (1979) concluded "pornography fills the void created by lack of education provided by parents and teachers…it is a source of information for most teenagers who have no one to explicitly talk to about sex" (p. 153). Other researchers concluded, "Pornography is seen as one of the few media which provide imagery and a language for the process of sociosexual development" (Berger, Simon, & Gagnon, 1973, p.159). This finding is difficult to confirm from adolescents themselves since most studies actually carried out with adolescents on their sources of sexual information (such as McReary, Juhasz, & Sonnenshein-Schneider, 1987) employed structured questionnaires, with sexually explicit media not listed as a choice.

A US study suggested that the youth who are most likely to seek out pornography online may be facing multiple challenges. There were trends for these youth (mostly boys) to be more likely to report indicators of substance abuse, delinquent behaviour, and clinical features of depression (Ybarra & Mitchell, 2005). The researchers did not offer a reason why this population of boys would seek out pornography, or the role it would play for them. Some research suggests that accessing prohibited media content is a way for adolescents to demonstrate their self-perceived maturity or, more specifically, for boys to show their manhood (Cantor, 1998).

The limited literature provides indications that using sexually explicit media content is not considered part of a holistic range of adolescent sexual activity by the

health establishment. For some adolescents it is a source of pleasure and stimulation, for others it functions as a source of information and imagery around sexual activity. For still other adolescents, it may be a marker of a change in status in maturity. More research is needed to capture the range of ways in which sexually explicit content functions for individual adolescents.

Despite the fact that little is known about adolescents' experience of sexually explicit content that takes place in their homes and communities, research shows that parents are concerned about their children's exposure to sexual content and that they make some efforts to mediate this experience. Regulations also exist to "protect" minors from sexually explicit materials. The next section of the review discusses parental mediation and government and industry regulation of sexually explicit content to adolescents.

Mediation of Adolescent Access to Sexually Explicit Media--Parenting and Policy

Some aspects of the contemporary media environment make it difficult to regulate content to minors, both from parenting and policy-making perspectives. These aspects include, but are not limited to: a media saturated environment; adolescents' expertise with media; a plethora of content choices; the pervasiveness of sexual content; access to content from all over the world; differing community standards and time zones; advances in media technology driven by the pornography industry; and control over content being in the purview of the media user, not necessarily with regulators.

Parental Mediation of Sexually Explicit Content on the Internet

This section of the review examines the literature on parent mediation of their adolescent children's media use, particularly around sexual content. Findings from studies conducted with adolescents on four continents show remarkable consistency in the lack of parental monitoring of media use, scant use of blocking technologies, and little discussion with their adolescent children about sexual content. They also reveal adolescent rule breaking, overriding blocking technologies, and reluctance to report experiences with upsetting sexual content to their parents. Differences between parent and child reports of parent mediation behaviours are also consistent throughout the literature.

Concerns about sexual content. The majority of parents of adolescents in North America (and elsewhere in the developed world) are concerned about sexual content in the media. For example, over two thirds of parents in a large US sample are "very" concerned about the amounts of sexual content their children see in movies or on TV (Rideout, 2004). Although plenty of information is available on parent mediation of television, it is impossible based on the available information to decipher how that concern translates into mediation behaviours for some of the newer media platforms such as digital, satellite, or cable television, or DVD use. What is clear from the literature, however, is that parents are particularly concerned about their children's access to sexual content on the Internet. It is apparent also that children and adolescents are accessing sexually explicit content on other media in addition to the Internet.

In a nationwide study, over half of American parents reported that they find sexual images to be more objectionable than other types of content on the Internet (Cox Communications, 2004). An Australian study found that almost half of parents reported online pornography as their main concern with their child's Internet use (more of a concern to them than their children contacting strangers online), and 63% of parents in the sample reported that it was of some concern to them (Australian Broadcasting Authority and NetAlert, 2005). Just over one third of Canadian parents surveyed reported that their greatest concern with their children being on the Internet was that their child will come in contact with sexually explicit material (Environics, 2002). Reported parental concern about this risk decreased slightly with the age of the child, with 60% of Canadian parents of 12 and 13 year olds reporting some concern compared to 68% of parents of 8 and 9 year olds.

Some young people also think that the prospect of encountering sexually explicit content online is of concern. Three quarters of American 10 to 17 year olds think adults should be very concerned about the problem of young people being exposed to sexual material on the Internet; interestingly, those who had experienced unwanted exposure were less likely to say this. The authors suggest that this attitude may be somewhat based on preconceived notions rather than experiences but that, on the whole, youth agree with the perspective of most parents and policy makers that access to sexually explicit material by minors should be limited (Mitchell, Finkelhor, & Wolak, 2003). An Australian study showed that children's worry about involuntary exposure to pornography online increased with age (Australian Broadcasting Authority and NetAlert, 2005), just as parent concern begins to decline.

Parents consistently underestimate the amount of exposure their children have to pornographic materials online. Only one fifth of parents in an Australian study thought their children had been exposed to pornography online, compared to the children's reports where nearly half of 12 and 13 year olds indicated they had encountered sites their parents would not approve of (Australian Broadcasting Authority and NetAlert, 2005), revealing the lack of child reporting such incidents to parents. This disparity was slightly more common in households with boys. A study from Singapore found that only one fifth of parents in a sample of 1500 reported that they thought their children had accessed online pornography while more than two thirds of the youth respondents reported accessing it deliberately or accidentally (PAGI, 2004). Over half of Canadian 10 to 19 year olds surveyed reported exposure to pornographic content online, but less than one quarter of parents surveyed thought their children had been exposed to such content. When asked how much their parents know about the Web sites they visit, just less than half of young people reported that their parents know very little or nothing at all. Fewer than 2 in 10 reported that they think their parents know a 'great deal' about the sites they visit. When parents were asked how much they knew about the sites their children visit, over two thirds said they knew a 'great deal' or a 'fair bit' (Environics, 2001). Australian researchers asked further questions of respondents who had not disclosed their accidental exposure to Internet pornography to their parents, and reasons given for doing so included feeling capable of dealing with it without parental assistance, not wanting to upset their parents, and fear of repercussion (Australian Broadcasting Authority and NetAlert, 2005).

Parent mediation behaviour. Atkin (et al., 1991) grouped parent mediation of cable television into two types of behaviours: restrictive and nonrestrictive mediation. Restrictive mediation is characterized by parents setting rules for viewing and prohibiting some kinds of viewing or use. Nonrestrictive mediation is characterized by parents using media with their children, providing recommendations for content choices, and discussing content choices with children. Atkin found that restrictive techniques are more common, and younger children are more likely to be the objects of nonrestrictive mediation than are adolescents (at a time when they may be likely to need it the most as their media environment expands and they engage in more solitary media use).

Researchers have not fully explored the motivating forces behind parental mediation. Atkin found that parental mediation was very hard to predict based on household and family characteristics—few variables in the child's near environment consistently predicted mediation (2001). However, there is some evidence that parents with higher levels of education may be more likely than less educated parents to be early adopters of new media and less likely to provide restrictive mediation (1997, 2001). Singaporean researchers also found that parents who were high school graduates were more aware of the risks of their children's exposure to online pornography compared with those are not graduates, but the researchers did not state if this lead to more mediation (Liau et al, 2005).

One motivator for parent mediation may be awareness of their child's prior experiences accessing sexual content. Parents of American youth who had experienced unwanted exposure to sexually explicit online content reported slightly higher rates of discussion with children about what they had been doing online, checking the screen

while children were online, checking the online history, and checking their files or diskettes for content (Mitchell, Finkelhor, & Wolak, 2003). The authors attribute parent reports of increased supervision for this group of children to the children's previous history of accessing inappropriate content (and to parental over reporting their efforts to appear responsible to the interviewer).

Parent and child perceptions of their interaction about sexually explicit Internet content differ, or perhaps their level of honesty in reporting their behaviours differs. In a Singaporean survey, two-thirds of parents reported talking to their children about Internet pornography, but only one third of the teens surveyed reported talking to their parents about it. Just over half of parents claimed they surf the Internet with their children - yet just one third of the teens reported having their parents surf with them (PAGI, 2004). Canadian households present a similar dynamic. For example, just over one third of Canadian parents felt they talked a 'great deal' with their adolescent children about what their children did online, but only 5% of the adolescents reported that their parents talked to them a 'great deal' about online activities. Although more than half of parents surveyed reported that they provide a 'great deal' of supervision for their children's Internet use in the home, a majority (83%) of Canadian 9 to 17 year olds reported spending most or some of their time on the Internet at home unsupervised (Environics, 2001).

Parents reporting "high involvement" supervision of their children's Internet use tend to decrease as children's age increases. An Australian study found that by the time their children are ages 12 and 13 only 11% of parents report high involvement supervision (Australian Broadcasting Authority and NetAlert, 2005). These findings are

similar to those of Singaporean researchers who found that parents who have children below 12 years of age are more aware of pornography issues than those with older children (Liau et al, 2005).

Given the reported degree of parental concern about their children's exposure to sexual content online, less than two thirds of Canadian youth aged 13 and 14 reported having rules about websites they are not supposed to visit and little supervision to ensure they are complying with the rules (Environics, 2001). The authors of the *UK Children Go Online* study found that there is no direct relationship between parental rules and regulations and the range of risks that children encounter on the Internet. The authors assert that simply banning children from certain online activities seems ineffective. The study found that children claim a higher incidence of risky experiences online than their parents recognize, suggesting that parents may assume rules are not needed when they are and, conversely, that parents claim a higher degree of domestic rules and regulations than their children recognize, suggesting that parents tend to assume rules are being followed when they are not.

Children protect their online privacy from their parents. Nearly one fifth of a UK sample reported deleting the history that shows what Web sites they have visited on the computer (Livingstone & Bober, 2004). Just over one third of Canadian youth surveyed reported deleting their online history, and over three quarters of the sample of 9 to17 year olds reported knowing how to do so. Less than one quarter of Canadian 13 and 14 year olds reported that parents check which sites they have been on at least occasionally, yet 67% of Canadian parents say they check the bookmarks or browser history to see where their children go online (Environics, 2001).

Rates of use for blocking software on the Internet are low. About one third of parents in Internet using homes in the US reported using blocking software, (Mitchell, Finkelhor, & Wolak, 2003), as did about one third in Canada and Australia (Environics, 2000; Australian Broadcasting Authority and NetAlert, 2005). Half of the Australian parents who had not installed blocking software reported that it was because they trusted their child.

Australian parents also cited lack of Internet and computer knowledge and lack of time (especially for sole parents and full time workers) as impediments to supervising their children online (Australian Broadcasting Authority and NetAlert, 2005). Some research has shown that parents take a highly selective approach to controlling their children's media use, expressing more comfort mediating on platforms about which they are knowledgeable, usually less sophisticated platforms such as television and VCRs (Pasquier, 2001). Moreover, the more effort required on the part of parents to mediate children's viewing (such as learning to use new technologies), the less likely parents are to mediate (Atkin, 2001), which may explain low rates of mediation with new media technologies such as the Internet, or with Internet applications such as file sharing or instant messaging.

Often, young people are the most knowledgeable Internet users in the household. Half of the youth sample in the *Young Canadians in a Wired World* study reported knowing more than their parents about how to use the Internet. Just over half of Canadian youth reported learning about the Internet from friends their own age and just under half say they have learned by experimenting and exploring on their own (Environics, 2001).

In Canada, the media rich environment has not elicited rigorous parental mediation of children's media use. Over half (60%) of 13 and 14 year olds surveyed in *Kids Take On Media* (Canadian Teachers' Federation, 2003) reported that they have no parental guidance about what they can watch, although the study also found that, in the home setting, parental supervision leads to markedly less viewing of restricted material. Even for children as young as nine, the highest rates for child reports of parental involvement of any kind with any media never rises above 50%. The majority of participants reported that their parents do not discuss media content with them. When parents do discuss content, they are most likely to raise concerns about violence and are more likely to talk to boys than girls. Sexism in the media is unlikely to be discussed with either gender and no studies indicate that Canadian parents are discussing pornography with their children. Almost three quarters of adolescents reported that their parents do not talk with at all or talk with them very little about what they do on the Internet, and most reported knowing more than their parents about the Internet. Only 19% of the sample reported that a V-chip (a device embedded in televisions that allows parents to block certain content) was in use in their home.

Given the plethora of media platforms in their homes and in the homes of friends, the range of programming available to adolescents is vast. By grade seven, three quarters of adolescents have watched restricted movies on video or DVD in the home, and one-quarter of them have personally rented a restricted movie. Many of the restricted movies that adolescents watch are already in the home or have been rented by older siblings, friends, and parents (Canadian Teachers' Federation, 2003). In his research on media use in the family context, Atkin (1991) uncovered the paradoxical finding that the addition of

cable television to the home results in more viewing sanctions as well as more unsanctioned viewing, resulting in children's exposure to restricted content. In the contemporary media environment, parents choose to bring a vast array of electronic media entertainment into the home, yet they may not have the resources to effectively mediate their children's exposure to sexually explicit content.

The poor parental mediation experience of Canadian adolescents is common to their counterparts in other countries. The literature from developed countries on four continents shows that parental concern about their children's access to sexual content in the media is high, yet little effective parental mediation-- supervision, discussion, regulation, or enforcement of rules around their children's media use-- actually takes place in the home. Several studies show that parent concern over inappropriate content declines as children reach adolescence, just when more concern might be beneficial (Australian Broadcasting Authority and NetAlert, 2005; Liau et al, 2005). Parents appear to be unaware of the extent to which their children are exposed to sexually explicit content, and adolescents appear reluctant to disclose their accidental exposure to such content to their parents.

Parents' perceptions of their mediation behaviours (or their honesty in reporting their mediation behaviour) differ significantly from those of their children. Parents claim to have a higher degree of domestic rules and regulations and provide more supervision of their children's activities online than their children report. Setting rules may not provide a direct deterrent for accessing sexually explicit content online since children often subvert the rules and parents do little enforcement. Their children often know more about the media technologies than they do, and yet even the most sophisticated blocking

technologies, such as systems requiring a password, do not seem to be effective in many homes.

Nothing is known about the level of discussion between parents and adolescents around sexually explicit content for media other than the Internet. However, based on the scant amount of discussion about pornography reported by adolescent Internet users, it is reasonable to assume it is a rare experience involving other types of media. Despite the universal finding that a majority of parents are concerned about their children's exposure to inappropriate content, parents continue to bring an ever expanding array of media platforms into the home.

High levels of parental concern about their children's access to sexually explicit media content (particularly via the Internet), low awareness of their children's activities online, and the lack of effective mediation reported by young people may indicate that parents require education and skills training to parent effectively in the contemporary media environment.

For many of the new electronic entertainment media, control over content choices is required from within the home, not from government or industry regulators. The convergence of a universally high degree of parental concern over content, the reported lack of effective parental mediation, and the need for regulation in the home, results in media saturated homes where parents are ill equipped to mediate new technologies, and adolescents have unfettered, and sometimes unwanted, access to sexually explicit media.

Government and Industry Regulation of Sexually Explicit Media Content

Regulation of the contemporary electronic media environment has shifted in many ways from policy makers and regulators onto the consumer, and to parents in particular.

Policy initiatives indicate that governments hope to devolve responsibility for Internet content regulation onto parents (Livingstone, 2003). Due to the emphasis on consumer choice on the Internet and specialty TV, technical forms of mediation are optional and must be implemented by parents. Many argue that technical solutions such as blocking software for computers and PIN numbers for specialty TV services are insufficient and cannot replace supervision and parental guidance. However, many parents lack the confidence, understanding, or skills to guide their children's media use and these technical solutions provide at least some measure of restriction to content that parents do not want their children to access (Livingstone, 2003).

Regulation of television media (Including satellite, digital, and other specialty services) is a national jurisdiction. Government bodies, such as the Australian Communications Authority, the Federal Communications Commission in the US, and the Office of Communications (Ofcom) in the UK, play a dual role of promoting industry self-regulation and competition while protecting consumers. The Canadian Radio-television and Telecommunications Commission (CRTC), the agency that regulates Canada's broadcasting and telecommunications systems, reports to Parliament through the Minister of Canadian Heritage (CRTC, 2005). The CRTC does not monitor content directly. Rather, it facilitates the resolution of complaints from the viewing public by referring them to the appropriate industry self-regulatory council, such as the Canadian Broadcast Standards Council, or the Cable Television Standards Council. These industry codes of conduct specify that content must not contravene the Criminal Code of Canada,

which defines and prohibits obscenity and child pornography[1]. When these codes are breached, the CRTC has the power to impose penalties and law enforcement bodies are empowered to take appropriate actions against the offending broadcaster.

Specialty TV service providers make parental controls available to consumers, but parents need to implement these controls inside the home. Canadian satellite TV providers offer services that allow parents to lock out channels, to lock out certain types of content, or content with specific ratings, (or a combination of all three), to protect children from viewing adult programming. To watch programs or channels that are locked, the viewer must enter a password. Once the password is entered, that show or channel will be unlocked until the lock is reset or until the receiver is turned off (Starchoice, 2005). No research has been done on the effectiveness of this system of parental control, but research in the UK has found that a significant majority of adolescents in homes that access specialty TV services know their parents' PIN numbers, even though parents think they do not, and have used them without parents' permission to access TV services (Ofcom, 2005).

Internet Service providers (ISPs) are also licensed by the CRTC, and the same model of industry self-regulation and consumer-driven complaints that is used to regulate specialty TV services is used to regulate the Internet. However, a study by Industry Canada (2001) found that over half of Canadian parents who wanted to make a complaint about Internet content did not know who to complain to. Many ISPs have implemented a variety of practices to help their customers have a safe Internet experience. These practices include providing information on Internet safety, operating complaint lines and

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[1] An obscene publication (including broadcast media content) is one in which a dominant characteristic is the undue exploitation of sex, or of sex and any one or more of the following subjects, namely, crime, horror, cruelty and violence (CRTC, 1990).

making available Internet filtering software, or information on where customers can obtain such software, and providing child-friendly search engines.

According to one researcher, video and DVD are the most widely diffused modality for viewing adult fare (Atkin, 2001). Because other media can be used in combination with video and DVD (for example, specialty TV or Internet content can be saved onto video or DVDs for later viewing) the complexity of regulating video and DVD content to adolescents cannot be placed solely in the purview of renters and retailers.

In Alberta, compliance with laws restricting access to sexually explicit content on video and DVD is not monitored systematically. Rather, retailers are assumed to be complying with laws and corporate policies, and law enforcement officials follow up on complaints from the public. Alberta's *Amusements Act* stipulates that, in retail stores, sexually explicit video and DVD must be displayed in a room minors cannot access, and materials labelled for adults only cannot be rented or sold to minors (Queen' s Printer, 1997). The types of adult video and DVD content available in Alberta may be different from what is found in other provinces-- a recent article indicated that due to the complete absence of monitoring and few resources for enforcement, Alberta may have become a "dumping ground" for pornographic material that contravenes the *Criminal Code of Canada* obscenity laws (Stutt, 2003). Some video and DVD retailers have corporate policies stipulating that staff will enforce the Canadian Home Video Rating System, preventing minors from renting restricted content. However, there are no published evaluations of the effectiveness of this corporate policy, or information about how much adult product is rented or sold to minors in Alberta.

Little is known about how much parents know about technological devices for mediation in their homes, to what extent they implement them, or how children subvert these mechanisms. In addition, parents may not know how to get information about managing adult content in their homes, or where to make complaints about content they feel is offensive or illegal.

Areas for Future Research

The research on every aspect of young people's use of sexual and sexually explicit media is currently inadequate. In 1999, "a dozen key thinkers and researchers" in the field met to set an agenda for research on youth and the media which was published in a twentieth anniversary special edition of the *Journal of Adolescent Health*. Among their conclusions were opinions that scholars remain unaware about the media's effects on youth sexuality and that old regulatory models that assumed a scarcity of media sources may no longer be appropriate. The editors make recommendations for studies on the effects of increasingly explicit mainstream media (Brown & Cantor, 2000).

Other authors who have reviewed the literature on adolescent use of sexual media content have made the following recommendations for future research:

> Research needs to include development of well-specified and robust research measures and methodologies; ongoing national surveillance of the sexual content of media and the exposure of various demographic subgroups of adolescents to that content; and longitudinal studies of the effects of that exposure on the sexual decision-making, attitudes, and behaviors of those subgroups. Additional specific research foci involve the success of various types of controls in limiting exposure

and the mitigative effects of, for example, parental influence and best-practice media-literacy programs (Escobar-Chaves, 2005).

In their conclusion to the volume *Youth, Pornography, and the Internet*, the authors stated that they experienced a lack of reliable and valid science-based information for many dimensions of the topic. They encourage future researchers to investigate the voluntary or involuntary nature of exposure to sexually explicit content, and assess the long-term impact of exposure (Mitchell et al., 2003).

In the 1998 report on the effects of sexual content in the media for the Kaiser Family Foundation, a leading US think-tank on media and health, the authors recommended that research designed to understand the influence of mass media on sexual health must be informed by an understanding of the developmental changes in sexuality during childhood and adolescence, as well as socioeconomic, cultural, family, and peer influences. They also asserted that it is likely that the processes involved and outcomes of interest will differ for different groups of young people (Huston et al, 1998).

Although research has documented how young children cope with exposure to frightening content (Cantor, 2001), no research has explored adolescents' feelings of competence about how they manage content that adults believe is too much for them or the ways in which they manage viewing content that they feel is too graphic or intense for them, how they process it, and how it affects their subsequent choices, attitudes, and behaviours.Researchers need to pursue several ways of asking difficult questions (such as inquiring about pornography or other harms) and collect contextual information (Livingstone, 2002).

Given the pervasiveness of sexually explicit content in the lives of adolescents, detailed information about the ecology of their access to such content in the home and community guide parents and policy makers in their mediation efforts, provide sex educators with information about the types of content adolescents access to better teach to their needs, and guide the maintenance or formation of social supports for adolescent reproductive health.

Conclusions

Canadian adolescents live in a media saturated environment where they are often the most knowledgeable user of the media platforms in their homes. Sexually explicit content is a significant part of the media environment, and little is known about its effects on the sexual development of adolescents or the extent to which they are accessing it and the contexts in which they access it. Exposure to sexually explicit content on electronic media in adolescence is the norm for a majority of young people in the countries included in the review. Canadian children (aged 10-19) appear to have among the highest self-reported rates of deliberate seeking out of pornographic material online (almost one third), although overall exposure to sexually explicit Internet content for the entire sample (at around 50%) is lower than other countries. However, no research has documented their use of or exposure to sexually explicit content on media such as specialty TV or video and DVD.

This thesis is a step toward addressing the lack of knowledge around adolescent access to sexually explicit media content. This study used a human ecological framework to investigate Alberta adolescents' rates of exposure to sexually explicit content on electronic entertainment media in their homes and communities, and to identify the

contexts in which this exposure occurs, and to explore key factors that contribute to exposure.

CHAPTER II: THEORETICAL FRAMEWORK

Human Ecology Theoretical Model for the Study of Adolescent Exposure to Sexually Explicit Media

Human ecological theory provides a framework for the scientific and holistic study of human beings, their environments, and human-environment interactions. As an applied discipline, human ecology seeks to identify the forces that enhance human development, actualize human potential, optimize human functioning, and improve the human condition and the quality of lives of people (Westney et al., 1988). A human ecological approach to social science investigation allows for presentation of findings in ways that could be of immediate use to parents, educators and policy makers because they are presented in the context in which they occur in the environment of the developing person.

In 1979, Bronfenbrenner identified a problematic aspect of research on the effects of television use on the developing child—that is that many researchers focused solely on television as a direct influence on behavioural outcomes. Bronfenbrenner described the focus on behavioural outcomes in research on children and television as "*abridged* strategies in research" because they "overlook—conceptually, operationally, or both ways--the intervening contexts and processes that link the external conditions or events to the observed developmental change" (1979, p.243). Considering past studies of television's role in the family, in 1986, Bronfenbrenner wrote: "given the massive expansion of the medium" it is time to employ "research models that will be revealing not only of the family processes but of the developmental outcomes that they may generate" (p.737). Bronfenbrenner suggested that an *ecological* approach is more

appropriate for seeing outcomes from television use as affecting systems in the child's environment that may in turn influence the child's development and behaviour. To account for intervening contexts and processes, Bronfenbrenner explained use of television in the family using his model of ecologically embedded niches (1979).

This situation is mirrored by the literature on adolescents and sexual media. The majority of the studies done on the topic have investigated simple effects of use on sexual attitudes, values, and behaviour. Yet, little is known about how and why adolescents use such content, what factors contribute to their interest in it, how their near environment influences their use of it, and how their use affects their near environment.

Atkin (1999, 2001), one of the only contributors to the academic literature to apply human ecology theory to the study of children and media in a family context, stated that a "home-ecology based approach is useful" because "today's youth represent the first generation to grow up in a multimedia environment" and the model of ecologically embedded niches "can accommodate diverse regulatory, media, family and social influences on child media use and development, owing to its unique latitude for incorporating dynamically changing program environments and they way in which they impact audience viewing" (Atkin, 2001, p.67). In describing human ecological research on media use in the family context, Atkin states: "the multidimensional approach … which goes beyond conventional demographic predictors, is necessary to fully reflect media use in today's complex media environment" (1991, p.50).

Currently, there is no established theoretical framework for the study of adolescent access to sexually explicit content. Although Bronfenbrenner theorized about television use in the context of the family, he did not research this area himself. David

Atkin (1991, 2001) applied Bronfenbrenner's ideas to studies about media use in the family context, but studied media environments that do not reflect a contemporary Canadian media environment and did not specifically address sexual content. However, the human ecological theoretical framework can accommodate and support contemporary research on adolescents and media. Therefore, an overview of Bronfenbrenner's ecological orientation will be outlined here in the context of its suitability to the study of adolescent use of sexually explicit media.

Human Development in an Ecological Context

Bronfenbrenner defines human development as:

> ... the process through which the growing person acquires a more extended differentiated, and valid conception of the ecological environment, and becomes motivated and able to engage in activities that reveal properties of, sustain, or restructure that environment at levels of similar or greater complexity in form or content (1979, p.27).

Bronfenbrenner originally described the human environment using a system of ecologically embedded niches. His language changed as he refined his theoretical model, and eventually he used the term *bioecological paradigm* to refer to the integration of conceptual elements successively introduced into ecological systems theory (1995). However, the language of ecologically embedded niches will be presented here along with more recent conceptions of a human ecological framework since Bronfenbrenner continued to use the concepts to describe and conceptualize discrete variables and interactions between the niches in the context of larger systems, and, the language of

ecologically embedded niches is used in the scant existing human ecological scholarship on children and media.

Ecologically embedded niches are interrelated structural systems in the human environment (see Figure 1) represented by a set of nested systems with the individual at the centre. They include: microsystems (immediate settings containing the developing person, such as the home, daycare, or school); mesosystems (relations among these settings, such as between the daycare and the school, or between the parents and the school); exosystems (relations among these settings and settings that do not involve the developing person but in which events occur that have an effect on the developing person, such as parents' place of employment); macrosystems (overarching patterns of ideology and organization of social institutions); and, ontogenic systems (individual biological and psychological competencies). Bronfenbrenner recognized the complex role of media in the family context, placing television as "a second-order effect…operating not completely within a microsystem but rather across ecological borders as an exosystem phenomenon" (1979, p.242).

Atkin applied the model of ecologically embedded niches in a 1991 study called *The Ecology of Children's Television Viewing: Parental Mediation and the New Video Environment*. One of Atkin's goals in the study was to measure many of the "large number of potential influences on parental mediation, and their possible interaction". The model of ecologically embedded niches helped him organize this task by providing a structure within which to take inventory of the variables in the ecology of parental mediation of children's access to restricted content. He was able to correlate viewing of restricted content with micro, macro, and exosystem variables.

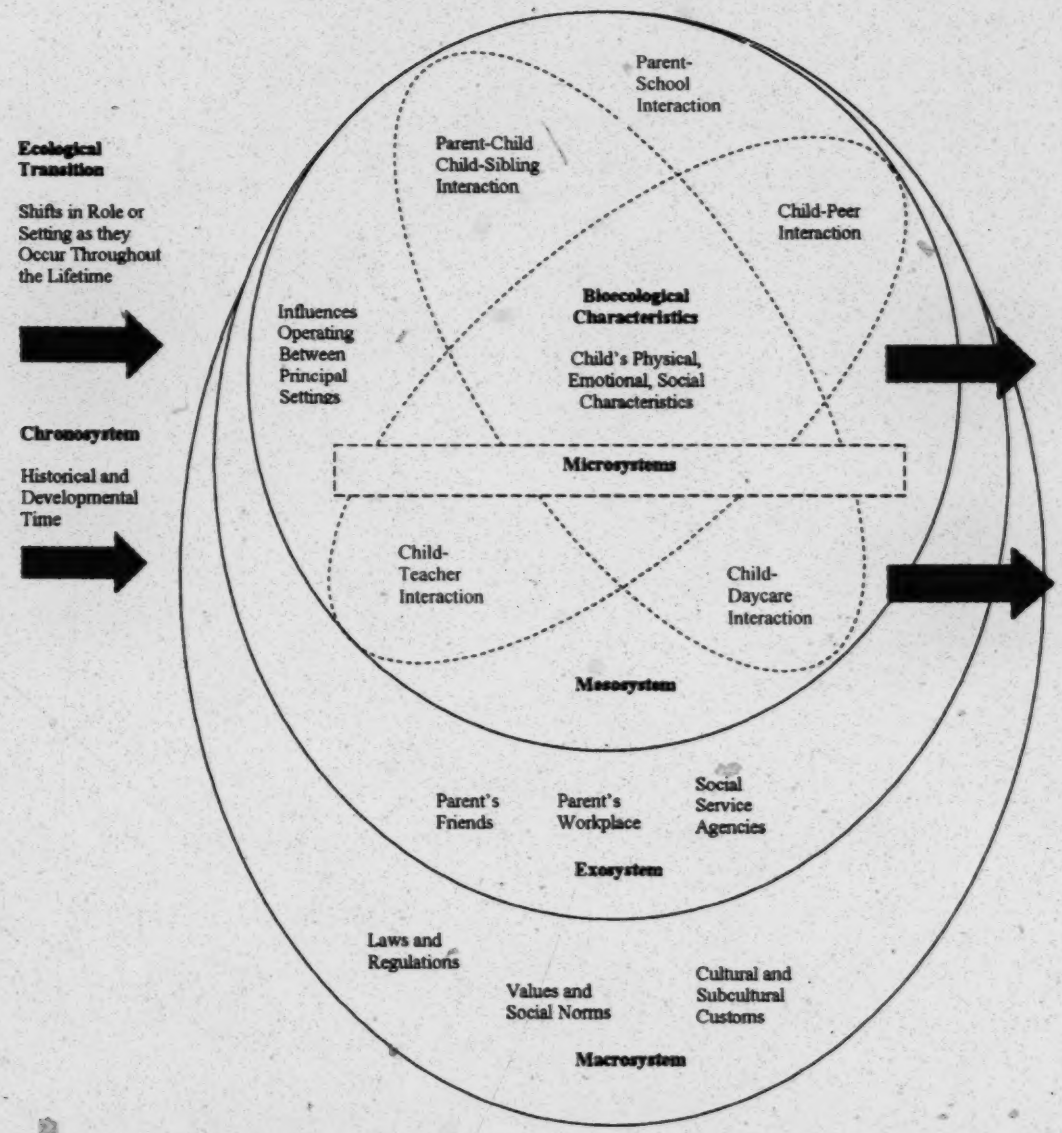

Figure 1. An ecological model of human development (Adapted from Bronfenbrenner, 1979 and 1995).

Scientific Paradigm for Investigating the Impact of the Environment on Development

Bronfenbrenner articulated a research paradigm for the study of "development–in-context" (1986), a framework for investigating the ways in which intrafamilial processes are affected by extrafamilial conditions. One framework within this paradigm is the "person-process-context model", which provides a way to conceptualize and account for three different environmental systems that can serve as sources of external influence on the family and the individual within the family setting: mesosystem, exosystem, and chronosystem.

Mesosystem. Research designs can include the mesosystem by "identifying the influences operating, in both directions, between the principal settings in which human development occurs" (1986, p.723). The most obvious immediate settings in which development occurs are interaction with parents in the home and, especially for adolescents, their interaction with peers. Home media environments also are critical settings for development, particularly given that electronic media use is the dominant leisure time activity for Canadian adolescents. Blocking technologies on computers and parental television controls can change the structure of the media environment.

Interactions between the developing person, their friends, the media in their homes and in friends' homes and processes and interactions occurring with parents around their media use comprise a mesosystem for media use. Atkin (2001) identifies "the child's relations among home media environments" as a mesosystem dimension. Bronfenbrenner (1986) cites research using mesosytem models that identified processes such as parental monitoring that affected undesirable behaviour by children with their

peers, and processes that account for children's susceptibility to peer influence. A research design incorporating the mesosystem would be suited to measuring the relative effects of microsystem dimensions that comprise it and would allow for an understanding of the interactions and processes that shape the developing adolescents use or avoidance of sexually explicit media.

Exosystem. Exosystem dimensions can accounted for in research designs that operationalize what happens in the environments in which children spend their time, but also what occurs in the other settings that are "external" to the developing person. The exosystem comprises linkages and processes taking place between two or more settings, at least one of which does not involve the developing person, but in which events occur that only indirectly influence processes within the immediate setting in which the developing person lives (Husen & Neville, 1994). Atkin (2001) identifies the content environment of media —the range of programming available on a given platform-- as its most important exosystem variable. He asserts that new video media "open the distribution system to potentially unlimited channel and content capabilities" and the consequence of this change for families is that "these new outlets present new windows on the world that offer heretofore unseen glimpses into adult-oriented realms" (p.52). He points out that families must contend with "the removal of social system controls" such as indecency restrictions on traditional broadcast television, and that this places pressure on the microsystem interactions between parents and children, as parental mediation is the "last line of defense" for the protection of children from strong content. A research design that accounts for exosystem dimensions would allow for the investigation of how the sexually explicit content environment of the new media interacts across "ecological

borders". The contemporary sexually explicit content environment for all forms of electronic media is a vast, dynamic exosystem dimension.

Investigating the processes involved in adolescent interaction with sexually explicit content environments has implications for parents and policy makers: "More than any other setting, the exosystem influences and is influenced by public and private policy decisions, especially where the media are concerned" (Atkin, 2001, p.52).

Parent education level is an exosystem variable that may have an effect on parent-child interaction around media use. Bronfenbrenner agued that "education appears to be an important source for parents' conceptions of the nature and capacities both of the child and the parent at successive stages of the child's life" (1986, p. 736).

Chronosystem. Research that "make possible examining the influences on the person's development of changes (and continuities) over time in the environments in which the person is living" incorporates chronosystem dimensions (Bronfenbrenner, 1986). The simplest form of chronosystem focuses around a normative life transition such as puberty, a change that serves as a direct impetus for development. It can also influence development indirectly by affecting family processes. Bronfenbrenner later expanded his conception of the chronosystem (1995), and these dimensions of the chronosystem as they relate to the study of adolescent use of sexually explicit media will be discussed in the following section.

In his later work, Bronfenbrenner referred to this person-process-context model for research design as a "truncated" form of the model he would later refer to as the "bioecological paradigm" (1995, p.620).

Bronfenbrenner's Bioecological Paradigm

The bioecological paradigm is a system that accounts for "the form, power, content and direction of the proximal processes effecting development" (Bronfenbrenner, 1995, p.621). These proximal processes vary systematically as a joint function of the biopsychological characteristics of the developing person, characteristics of the environment, (both immediate and remote), in which the processes are taking place, and the nature of the developmental outcomes under consideration. A research design that permits the simultaneous investigation of these factors is referred to as a process-person-context-time model (Bronfenbrenner, 1995, p.621). Bronfenbrenner asserts that when a bioecological paradigm is expressed in the form of concrete hypotheses, can be subjected to empirical testing.

Bronfenbrenner describes proximal processes as behaviours that involve "progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate environment" (1995, p.261). In order to be effective, the interaction must occur on a fairly regular basis over extended periods of time. Bronfenbrenner includes learning new skills as an example of an outcome of proximal processes. Other people in the developing person's environment in are referred to as significant others and the belief systems of parents and friends are included as important influences in proximal processes. In his earlier work, Bronfenbrenner states:

> "environmental events that are the most immediate and potent in affecting a person's development are activities engaged in by others with that person or in her presence. Active engagement in, or even mere exposure to, what others are

doing often inspires the (developing) person to undertake similar activities on her own" (1979, p. 32).

Bronfenbrenner asserts that proximal processes are useful for describing development because they can lend predictive power to research designs. Proximal processes also have "substantive and theoretical significance" as the mechanisms of organism-environment behavioral interactions that drive development. Research designs that account for proximal processes encapsulate the ways in which these mechanisms are affected by the characteristics of the developing person and the environmental context in which the interaction takes place. Bronfenbrenner characterizes proximal processes as being microsystem interactions, but mesosystem, macrosystem, and exosystem variables contribute to the processes on an environmental level.

Proximal processes involved in accessing sexually explicit content would include organism-environment interactions such as accidental exposure during solitary media use and exposure through peers in social settings. Proximal processes that could contribute to avoidance of sexually explicit content may include parents making their belief systems explicit through rules and discussions, using blocking software or TV controls, and closely supervising their children's media use. These two forces occurring simultaneously exemplify Bronfenbrenner's idea of "force-resource" applied to the significant others in the near environment as instigators and maintainers of reciprocal interaction with the developing person. Environmental contexts for these proximal processes vary with the household in which they occur (at home or in a friend's home, for example) and the types of media platforms accessible to the developing person in a given setting.

Variations in personal characteristics-- such as age, gender, physical and cognitive development, and a developing person's interests, influences, and personality-- can account, in part, for variations in individual susceptibility to developmental effects of environmental conditions and proximal processes. When these personal characteristics are accounted for systematically in a human ecological model, they are referred to as biopsychological characteristics (Bronfenbrenner, 1995). Biopsychological characteristics that affect adolescents' interaction with their environment include gender, physiological changes that accompany puberty, along with social changes that occur in adolescence such as an increased emphasis on matters relating to sexuality with peers, and possibly an interest in sexually explicit imagery.

The "person-process-context-time model" assumes that the impact of a particular external environment on the family, such as media, will differ with the personal characteristics of family members, including the developing child. Individuals who have been exposed over time to similar environments or proximal processes but have contrasting biopsychological characteristics are likely to exhibit differing developmental effects (Bronfenbrenner, 1995).

Atkin (2001) argues that biopsychological characteristics (which he refers to as the ontogenic realm) is perhaps the most promising area of inquiry in explaining media adoption, use, and mediation.

More recent conceptions of the chronosystem. The "time" or chronosystem (Bronfenbrenner, 1986, p.733) dimension of the person-process-context-time model involves considerations of time and timing as they relate to features of the environment and the developing person. The time dimension, or the "life course perspective" includes

three tenets: historical time, the timing of biological and social transitions, and the interconnected but differing way members of a family react to the same historical change (1995). Each of the aspects of the chronosystem, and its application to understanding adolescent access to sexually explicit content is briefly explored.

From an historical perspective, more sexually explicit content is available now than ever before, and this deluge of content has occurred quickly, within one generation. The recent infusion of sexually explicit content into the near environment represents a new environmental force that can reasonable be thought to play a role in the sexual socialization of contemporary adolescents. How, or to what degree it changes their experience from that of their parents, or even the experience of people who were in adolescents five years earlier, is not known.

Given the rate at which the media environment changes, it can be assumed that the environment of sexually explicit content is also continually changing in form, content, and availability. An investigation of adolescent use of sexually explicit content could provide a "snapshot" of the experience of the participants and the processes in the near and external environments that play a role in their use of sexually explicit media in a historical context. Historical time must be considered for current and future research-- given that the media environment is dynamic-- it may be difficult to make meaningful comparisons between past and current research findings.

Biological and social transitions (or ecological transitions, as Bronfenbrenner has called them) are shifts in role or setting, which occur throughout the life span (Bronfenbrenner, 1979) and often serve as a direct impetus for developmental change (1986). Bronfenbrenner states that the developmental significance of ecological

transitions is that they almost invariably involve a change in role, which has the potential to alter how a person is treated, or how they think, act, or feel. An important ecological transition affecting children's use of media occurs as they reach adolescence: they exercise more individual agency in structuring their media use, understand that there is a world of restricted content to explore, are exposed to new and stronger types of content, and use media for increasingly social purposes (Woodard & Gridina, 2000; Comstock & Scharrer, 2001). Livingstone and Bober (2004) created a profile of the 13 and 14-year-old media user:

> "Relishing their new-found independence, these young teens are experimenting with and expanding their use of the Internet to pursue interest in games, fandom, music, etc... Still the focus of parental anxieties but concerned to maintain their privacy, they are no longer easily subject to parental regulation. (p.28)"

Some research even suggests that accessing prohibited media content is a way for adolescents to demonstrate their self-perceived maturity or, more specifically, for boys to show their manhood (see Cantor, 1998). A shift in role for adolescents from consumers of child oriented media content to adult oriented content, and to consumers of sexually explicit media in particular, can be viewed as an ecological transition. Viewed as such, a human ecological framework provides a useful way to organize environmental variables that affect and are affected by the shift in role. These include modeling of media use behaviour by peers going through the same transition, media environments containing sexually explicit content, and parental mediation behaviours. It can also accommodate individual factors, such as gender and level of interest in sexually explicit content. Little is known about the how the culturally defined construct "being a teenager" plays a role in

social expectations that adolescents perceive around accessing sexually explicit content, or the opportunities adolescents have to access such content, but they are certain to be different from those of adults or children.

> "The lives of all family members are interdependent. Hence, how each family member reacts to a particular historical event or role transition affects the developmental course of other family members, both within and across generations" (Bronfenbrenner, 1995, p. 642).

Parent and sibling reaction to a developing person coming into adolescence in a media environment where it is possible to access sexually explicit content may influence the outcome of whether, or how much, the developing person accesses such content. Parents may not be aware that a role transition (adolescent children becoming consumers of sexually explicit content) is taking place or has the possibility of taking place. Taking an inventory of how parents manage their children's media use in adolescence may be a useful starting point to investigate parent reaction to this role transition.

Assumptions inherent in the ecological orientation model. Bronfenbrenner asserts that the ecological orientation takes seriously and translates into operational terms a theoretical position that what matters in determining an individual's behaviour and development is the environment as it is *perceived*, rather than as it may exist in "objective reality" (1979, p.30). A child may experience new ways of perceiving their media environment even if, in "objective reality" the media environment may not have changed. For example, an adolescent may suddenly perceive his or her media environment as rich in sexually explicit content because of inadvertent exposure during increased independent use of media, exposure through social use with peers, because he

or she develops an increased interest in sexual imagery with the onset of puberty, or because parents have discussed online pornography with them.

Bronfenbrenner's scientific conception of ecological validity (1979)-- the extent to which the environment experienced by the individuals has the properties it is supposed or assumed to have by the investigator-- is reflected in research that inventories both the individual's experience of his or her environment (such as their experience with sexually explicit content) as well as individual's reports of the environment (such as the number and types of media platforms they have access to, or whether they perceive household rules around media use), or their perception of how much peers are accessing sexual explicit media and their peers' actual reports of this experience. Livingstone (2002) pointed out that often in research on children's media use, they are "spoken for" in surveys of parents, and that children's agency in their own media use must be acknowledged.

The Macrosystem of Subcultural Norms for Adolescent Use of Sexually Explicit Media Content

After reviewing the literature on adolescent use of sexually explicit media, it is apparent that little is known about the macrosystem of the cultural practices of the adolescent subgroup of the population around their use of sexually explicit media. Exploratory research using a bioecological model would lend itself to summarizing findings as overarching patterns of ideology and normalized behaviours for this subgroup.

The macrosystem of North American adult culture is full of confusing messages about sexually explicit content. Contemporary adolescents have been raised in a culture

where the infrastructure of the mass media is a significant part of the home environment (Canadian Teachers Federation, 2003; Kaiser Family Foundation, 2005). Sexually explicit content is a significant part of the programming, and such content is available and accessible (although to what extent on which media is not known). Sexually explicit content is accepted as a significant and lucrative part of the media landscape. Laws and regulations exist to prevent minors' access to sexually explicit content, but no evaluations exists to show whether the implementation of these laws or regulations are effective, or how minors view them or subvert them (Helsper, 2005).

Bronfenbrenner called for more research on television and the family, given that prior research had shown that media use may displace other ways of being, learning, and developing. Writing at a time when VCRs were still a luxury item in North America, before DVD players, Internet, digital TV, Bronfenbrenner stated that research on television and the family was "truly a terra incognita", and that its primary importance may lie "not so much in the behaviour it produces as the behaviour it prevents", such as social experience and family interaction (1986, p.736). It is imperative that the role of the use of sexually explicit media content in the life of contemporary adolescents is documented and investigated, because it has the potential to replace traditional experiences in sexual socialization.

Use of sexually explicit media content may be providing a new template for sexual socialization for adolescents, but that will remain "terra incognita" to the adults who try to guide them through adolescence unless we begin documenting their experiences with such media. The case may be that contemporary adolescents have their first sexual experiences alone, watching people have sex online, informing their first

interpersonal sexual interactions with an explicit set of assumptions garnered from their media experiences, rather than a more traditional experience of being informed by still images (if at all by explicit imagery) and learning through experience with partners. New behaviours may be normalized through this exposure that may not have been the norm before. For example, Swedish researchers found a dramatic increase in the number of high school students engaging in anal sex as a result of modeling from pornography (Haggstrom-Nordin et al, 2005).

The overarching cultural patterns for family media consumption in contemporary North American culture are formed household by household. Atkin (2001) describes the macrosystem of media use in the family context as "consistencies, in the form and content of lower order systems (micro, meso, and exo) that exist, or could exist, at the level of the subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies" (p.51). Microsystem data about media use at the individual and household level allows researchers to make observations and inferences to inform the construction of an ecological model of media use in a family context.

This study was conducted using a human ecological framework to organize key ecological variables relating to adolescent exposure to sexually explicit media in the home and community.

Study Purpose and Hypotheses

Given that little is known about the use of sexually explicit media content by adolescents in Alberta in their home and social environments, a study was conducted to answer the following research questions: What are the subcultural practices and normalized behaviours that comprise the macrosystem for adolescent use of sexually

explicit media? Do boys and girls have the same experiences with sexually explicit media? How do parents relate to their adolescent children about sexually explicit content? What internal characteristics, environmental factors, family or social dynamics are most powerful in determining adolescent access to sexually explicit media?

The study is an analysis of data from the *Adolescents and Restricted Media* study (Thompson, 2003), an investigation of thirteen and fourteen year olds' access to restricted media content in the home and community. The current study was designed as a person-process-context model, incorporating human ecological theory and the existing data set to construct a causal model. Although the questionnaire in the original study was not organized around ecological dimensions, grouping key variables from the data set along ecological dimensions allowed for testing a human ecological causal model. Given that data in the study is from anonymous questionnaires completed by 13 and 14 year olds, the assumption of ecological validity--investigating the environment as it is perceived-- is inherent in the study design.

Hypotheses Based on Relevant Literature

Given that the aim of the study is to identify subcultural norms and overarching patterns of adolescent use of sexually explicit media, a bioecological paradigm for adolescent use of sexually explicit media was modeled to organize environmental variables and variables from the data set into ecological dimensions (see Figure 2). Finally, a hypothetical causal model (Figure 3 at the end of the section) was constructed to test for unidirectional relationships between variables from the data set that represented exosystem, microsystem, and biopsychological dimensions and their effect on overall access to sexually explicit media.

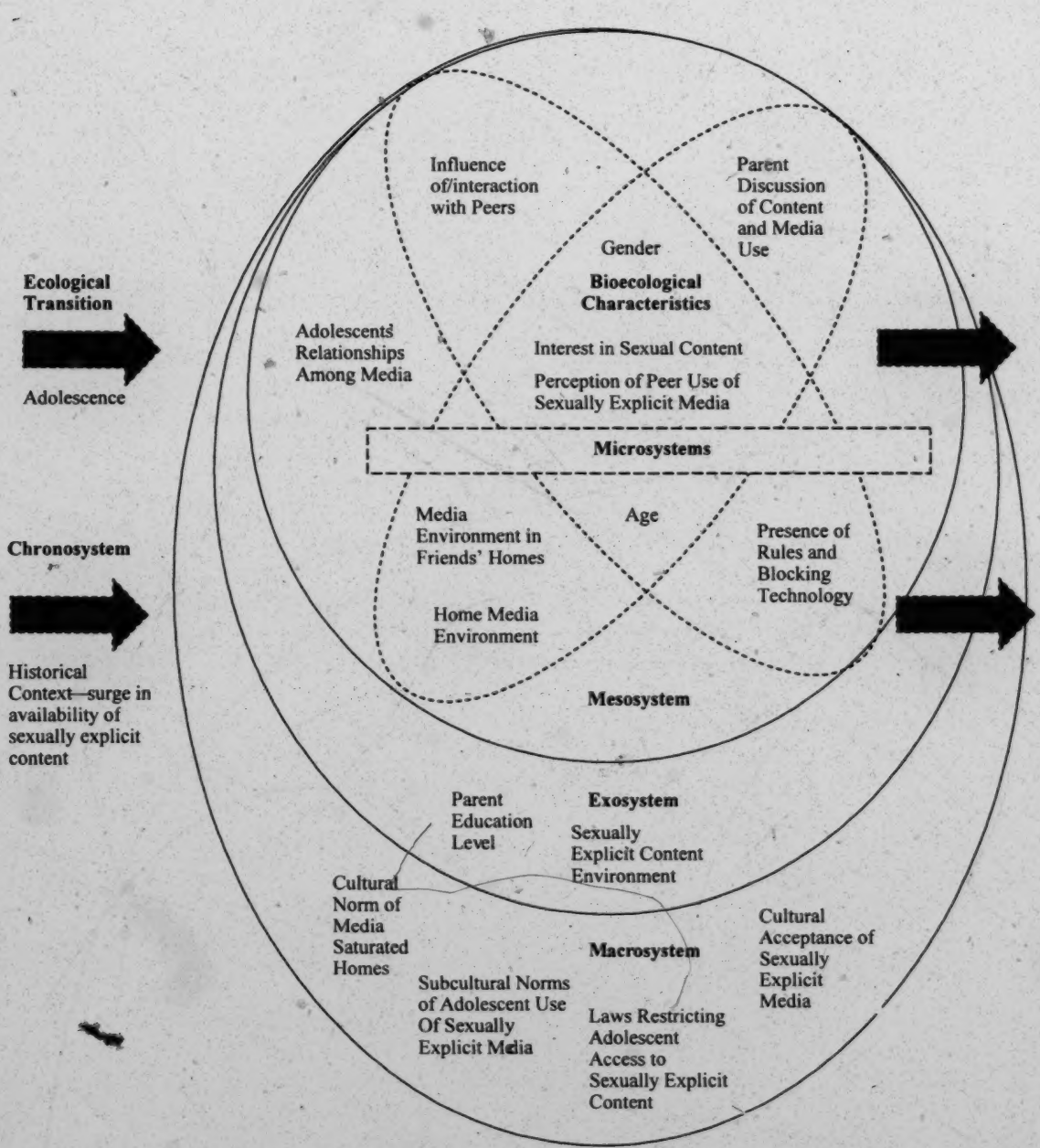

Figure 2. Bioecological paradigm for adolescent use of sexually explicit media.

The exosystem as a predictor for mesosytem dimensions. The exosystem dimensions included in the bioecological model (refer to Figure 2) are parent education level and the sexually explicit content environment of media. These two exosystem dimensions are included because they have been noted in the scarce human ecological literature on media use in the family context as theoretically having unidirectional effects on parent mediation (Atkin, 2001; Bronfenbrenner, 1986). Summarizing recent research on parent mediation, Atkin concluded that the content environment functions as an exosystem "houseguest" that "may motivate mediation behaviours" (2001, p.63). The study data provide measures of adolescents' perception of their parents' reactions to the content environment, and the actual content environment provides context for discussion of the results. Bronfenbrenner identified parental education level as an index of social background that offers a unique advantage for the analysis of causal pathways because it can be interpreted primarily as "unidirectional in its effects" (1986, p. 736). Thus, parent education level is included in the causal model as an exosystem predictor of both restrictive and nonrestrictive parent mediation, both microsystem dimensions. Atkin's (1997, 2001) research on the human ecology of family media use found a complicated relationship between parent education and mediation. His findings suggest that adopters of adult oriented services tend to be more highly educated, opposed to censorship and open to new ideas, and that pervasiveness of adult oriented content in new media outlets does not prompt greater mediation by parents—in other words, it is possible that more highly educated parents are surrounding their children with more adult material but with fewer controls than parents with lower levels of education.

Relationships within the mesosystem. Atkin described the mesosystem for adolescents' media use in the home as a way of conceptualizing their "relationships among media" (2001, p.51). The bioecological model for adolescent access to sexually explicit media includes relationships between microsystem dimensions (such as restrictive and nonrestrictive parent mediation, media environment, and media use with peers), and biopsychological characteristics (such as interest in sexual content and perception of peers' use of sexual content).

Research on children and the Internet has found that there is a discrepancy between parents' and children's perception of the rules regulating Internet use in the home. Parents tend to report higher levels of regulation than children do, and parents tend to assume rules are being followed, even when they are not (Livingstone & Bober, 2004). Thus, even if adolescents' report restrictive parental mediation, it may not be effective. Therefore, restrictive parent mediation is expected to have no direct relationship to access to sexually explicit media in a causal model. No prediction is made about a direct relationship between nonrestrictive parent mediation and access to sexually explicit media due to the lack of research on the topic. However, both restrictive and nonrestrictive mediation are included in a causal model as predictors for intervening variables affecting access to sexually explicit media.

Parent mediation was expected to affect other microsystem and biopsychological dimensions that could, in turn, affect access to sexually explicit media. Parent mediation was hypothesized as a predictor for peer influence and interest in sexual content, which predicted to function as intervening variables for access to sexually explicit media in the causal model. Nonrestrictive parent mediation is predicted to reduce interest in sexual

content by providing an open environment within the home for discussion of such content, demystifying it and reducing the "forbidden fruit" effect of a taboo subject area, an extension of the finding that prohibitive ratings on media content may actually attract young viewers (Cantor & Bushman, 2003). Nonrestrictive parent mediation was also predicted to have a negative effect on peer influence. It is predicted that households in which parents talk openly about media content will experience less influence by peers on adolescent children. Discussion of sexually explicit media will counteract peer influence. The hypothesized effects of nonrestrictive parent mediation on interest and peer influence provide an opportunity to test Bronfenbrenner's "force-resource" model.

Restrictive parent mediation is hypothesized to have a small positive effect on interest in sexual content. It is predicted that the presence of rules and prohibitions in the home will not reduce, but instead may increase, interest in sexually explicit content. This hypothesis is the extension of research findings that prohibitive media ratings actually deter media selection until the age of 8 but by the age of 11 and until at least the age of 22, prohibitive ratings and content descriptors (such as sexual content) exert an attraction effect, and by choosing prohibited or taboo material, adolescents demonstrate their self-perceived maturity or, more specifically, for boys to show their manhood (Cantor, 1998).

Restrictive mediation is also used as a predictor variable for peer influence in the causal model. Bronfenbrenner cited research that identified processes such as parental monitoring that affected undesirable behaviour by children with their peers, and affected processes that accounted for children's susceptibility to peer influence (1986). However, the negative effect of restrictive mediation on peer influence is predicted as modest, given that some aspects of peer influence, such as exposure to sexually explicit content in

the homes of friends, occur outside of the purview of parental prohibitions and enforcement of household media rules.

Parent mediation is hypothesized to have no effect on media environment (the media that adolescents access in the home and in friends' homes). Despite the most rigorous mediation in the home, adolescents will have access to a variety of media platforms at friends' homes that they may not have access to at home. Atkin (2001) cites research that finds that new video media environments allow for greater control over content by adolescents (videos or DVDs, for example) which allows teens to circumvent parental controls and pursue idiosyncratic subcultures (such as adult oriented content) (Roe, 1987). In addition, Atkin's own research on VCR and cable television in the family context found that infrequent and selective mediation of viewing occurred in households with varying types of media environments. He concluded: "It remains to be seen whether the increased facility for offensive fare (of a more complex media environment) invites greater parental mediation and control in Internet households" (2001, p.67). The causal model will test for a relationship between parent mediation and media environment.

Bronfenbrenner asserted that biopsychological characteristics can be examined as sources of variation in the person's susceptibility to the developmental effects of environmental conditions and of proximal processes (1995). Therefore, biopsychological dimensions (gender, interest in sexual content, and perceptions of peer use) are included in the causal model to test for their role in the mesosytem.

Direct relationships are hypothesized between overall access to sexually explicit media and key biopsychological and microsystem variables, but gender was not used as a variable in the model. Instead, the causal model was tested separately for males and

females. Some studies have shown that there are differences in the amount and frequency with which boys and girls access sexually explicit content, and both boys and girls correctly perceive that boys access it more. However, the literature offers no convincing argument about which variables in the near environment account for these gender differences in access to sexual media content, so the causal model was tested separately for males and females. The researcher hypothesized that the direction of relationships between variables in the causal model would be the same for boys and girls, but would account differently for variation in type and frequency of overall access.

Peer influence is hypothesized as a strong positive predictor of overall access given that the literature suggests that accessing sexually explicit content has social, not necessarily sexual functions, and may be an indicator of involvement in a peer group where an adolescent is introduced to sexual content or has an ongoing pattern of access with peers. Perceptions (either assumed or observed) that one's peers are highly active in seeking out such content may be normative and result in lowered inhibitions about seeking it out for oneself or increase motivation to do so in order have a shared experience.

Interest in sexual content is hypothesized as a strong positive predictor for overall access given that the literature on adolescents and sexual (though not necessarily sexually explicit) media suggests that interested adolescents seek out content that reflects their interests. Therefore a strong positive relationship between interest in sexual content and overall access to it is hypothesized.

Media environment is hypothesized to have a positive relationship with overall access, although not as strong as interest or peer influence. It is hypothesized that having

access to a wide variety of media platforms and contexts in which to access them creates increased opportunities for exposure, whether accidental or deliberate, leading to increased overall access to sexually explicit media content.

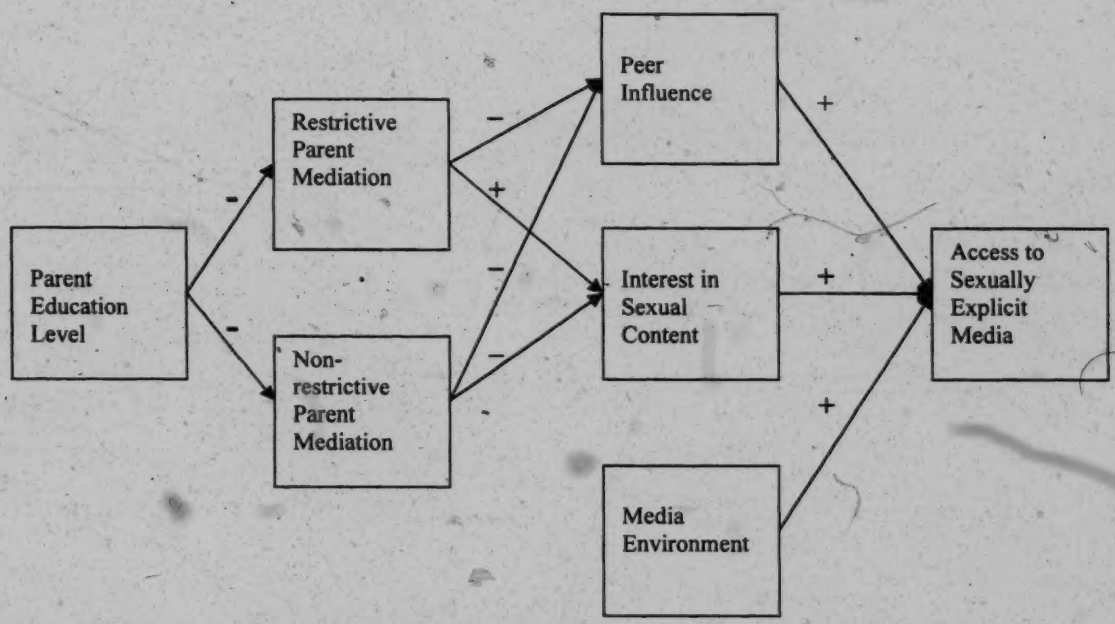

Figure 3. Hypothesized causal model for adolescent access to sexually explicit media content.

CHAPTER III: METHODS

In the previous chapter, a human ecological framework was proposed to investigate adolescent use of and access to sexually explicit media, and causal model was hypothesized. This section describes the procedures for data collection and the variables used to test the causal model.

Data for this study were gathered for the *Adolescents and Restricted Media Study* (2003), a descriptive survey of the nature and extent of 13 and 14 year olds' access to restricted media content. Although the study investigated participants' access to both sexual and violent content intended for adults, this thesis focused solely on those questions addressing adolescent use of sexually explicit media.

Sampling Procedure

Multi-stage cluster sampling was used to access grade eight students through the public and Catholic school systems in rural and urban areas of the province of Alberta in the spring of 2003. In Alberta's educational system, students in grade eight are typically 13 or 14 years of age. This age group was chosen because each media rating system in Alberta uses either age 13 or 14 as the first age increment above content recommended for children. This age group experiences a shift in media use away from television to other types of media, as well as increased identity formation through media and social and uses of media (Comstock & Scharrer, 2001; Woodard & Gridina, 2000).

Through letter of invitation, participation was sought first from school district superintendents, then from principals who forwarded information about the study to teachers of grade eight (see Appendices A and B). Permission to conduct the study was sought from all sixty-two school boards in Alberta. Thirteen Superintendents responded

favorably, and invited the researcher to contact all Junior High Principals in their districts. A letter was sent to principals asking them to forward information about the study to grade eight teachers in their schools (see Appendices C and D). Interested teachers from 17 schools contacted the researcher, and information sheets and consent forms for parents and students were forwarded to teachers and sent home with students to invite them to participate (see Appendices E through H). Those students who returned both a signed parental consent form and a signed student consent form participated in the study.

Survey Instrument

A 111-item paper and pencil questionnaire (see Appendix I) was designed to seek information about adolescents' media use in six categories: media adolescents have access to at home and in the community; adolescents' understandings of ratings for media intended for adults; parental and industry monitoring of adolescent media use and what types of adult content adolescents access through what types of media; adolescents' social uses of sexual, frightening, and violent content on various media; adolescents' experience viewing popular titles of computer games and movies intended for people 17 or older; and, some basic demographic information. A combination of multiple choice questions, checklists, and open-ended questions were employed.

Data Collection Procedures

The researcher mailed information and consent forms to interested teachers to distribute to their grade eight students. These teachers were asked to read the information sheet for students aloud with their classes to introduce the study and encourage students to participate. The researcher conducted follow-up telephone calls to teachers after

sufficient time had elapsed for students to consider participating, to take their forms home for parental approval and to return completed consent forms to the teachers. The teachers mailed completed consent forms back to the researcher so she could ensure that the required information was complete and calculate the number of questionnaires that would be required. The researcher scheduled a two-hour block of time convenient with each teacher to administer the questionnaires in person.

The researcher traveled to most schools and administered the questionnaires, but because of geographic distances between participating schools, teachers administered questionnaires in some of the more remote rural areas. Administration procedures were reviewed with these teachers by telephone and questionnaires were mailed to them upon receipt of the completed consent forms. The completed questionnaires were mailed back to the researcher in these cases.

Participants completed the anonymous questionnaire in exam-like conditions in their regular classrooms. Students not participating were allowed to stay in the room and asked to read silently or do an alternate assignment decided upon by the teacher. Upon completion, each participant sealed his or her questionnaire in an envelope. Most students completed the questionnaire in under an hour, though times varied with reading and response speed and students were instructed to complete only the sections of the questionnaire that applied to their experience and the media available to them. Students also wrote their names on slips for a draw for free movie passes and for a DVD player. In each classroom, once all students completed the questionnaires, the researcher or teacher drew a name for a pair of free movie passes. At the end of the study, a single

student name was drawn from all the slips for a DVD player. Data collection in all of the schools was completed over an eight-week period in 2003.

Ethical Issues

Informed consent. All possible steps were taken by the researcher to ensure that participants were able to give fully informed consent prior to participation. Teachers who encouraged their students to participate were asked to read the student information sheet aloud to their classes to let students know about the study. This information included: any possible risks to them presented by participating, the voluntary nature of their participation, how the information collected would be used, and how their anonymity would be maintained. The same information was then sent home with students in written form along with an information sheet for their parent or guardian. Participants and their parents were required to indicate on their respective consent forms that they had read and understood the information sheet before signing. Because the participants were all under the age of majority, a signed parental consent form was required in addition to a signed consent from each participant. The student information sheet stated that students were free to withdraw at any stage of their participation even if their parents had given consent for them to participate.

In case participants required further information at any stage of their participation, toll-free telephone, mail, and e-mail contact information for the researcher and her supervisor was provided on the information sheets with encouragement to contact the researcher should any questions arise. In addition, the information sheets included the name of the Department Chair for Human Ecology, stating that she was not involved in the project, so that any additional questions or concerns about the way the

research was being conducted could be directed to her. One parent did contact the researcher's supervisor for additional information.

Risks. Since participants were being asked to describe the most extreme media content they had accessed, there was a potential for remembering disturbing or upsetting content. The student and parent information sheets encouraged students who experienced unpleasant memories or were somehow bothered by participating to discuss their feelings with a parent, teacher, or school counselor. In addition, a toll free telephone number for a national children's crisis line was provided on the information sheets.

Confidentiality and anonymity. The following steps were taken to ensure that the information gathered in the study remained confidential. As the questionnaires were distributed, students were reminded that they were not to write their names on the questionnaires. The questionnaires are identified by identification numbers that signified whether they were completed in an urban or rural location, but did not link the participant or the school district to the information. Only the researcher and her supervisor had access to the completed questionnaires. Consent forms were stored for one year in a locked filing cabinet and then shredded for disposal.

Validity of self-reporting about sensitive issues. Having students report on private behaviours brings up questions about the validity of their reports. The questionnaires were completely anonymous, which should reduce under-reporting, but which brings up the possibility that participants might over-report for shock value. In fact, four questionnaires were discarded from the study before data analysis began because some of the open-ended questions were answered with crude language with an obvious intent to shock the researchers, and this raised concerns about the validity of the responses.

Despite the risk of over-reporting, an anonymous questionnaire was considered by the researchers to be the best means of collection for this type of personal information. A recent US study on unwanted exposure to pornographic Internet content found that many youth did not mention their exposure to anyone, not even friends and this lack of reporting may reflect some degree of guilt (Mitchell, Finkelhor, & Wolak, 2003). The anonymous questionnaire may have given the adolescents in this study permission to report on their experiences honestly without fear of reprisal.

Measures

This section describes the procedures used to create the indices that were used to reflect the variables identified in the bioecological causal model of adolescent use of sexually explicit media content. Indices were constructed from discrete questionnaire items to capture key variables representing biopsychological characteristics and dimensions of the micro and exosystems (see Appendix J for description of procedures used to create the indices). The indices (access to sexually explicit media, peer influence, interest in sexual content, media environment, restrictive parent mediation, and nonrestrictive parent mediation) were treated as continuous variables for the purpose of analysis. Parent education, a categorical variable, represented the exosystem.

The chronosystem is implicit in the design given that findings must be contextualized in the specific time in history the data was collected (2003) and charts the ecological transition of 13 and 14 year old media users and contextualizes them as a special population because of this life transition.

Access to sexually explicit media. An index, access to sexually explicit media, was created to capture adolescents' overall access to sexually explicit content. Scores

were computed for each participant for both the variety of media platforms on which they have had access to such content (video, DVD, satellite or digital television, pay per view television, and Internet) and the frequency of their exposure to sexually explicit content on each platform. These scores were summed to provide an index of overall access.

Peer influence. An index called peer influence was created to operationalize biopsychological and microsystem dimensions related to social networks and use of sexually explicit media. Each participant was given a score based on: his or her estimates of peer use of sexually explicit media on given platforms; whether they had accessed sexually explicit media alone or in a social content; the number of participants and gender makeup of exposure to sexually explicit content in social settings; whether they had gathered with friends in order to watch sexually explicit content together; and, whether this activity took place at home or at a friend's house. These scores were summed to provide an index of adolescents' perceptions of peer access to sexually explicit content as well as their social use of such content.

Interest in sexual content. An index called interest in sexual content was created to operationalize biopsychological and microsystem dimensions around expressed interest in or behaviours that indicated interest in sexual content. Each participant was given a score based on: indication of interest in watching a movie with a sexual content warning; reported success in renting or buying a pornographic video or DVD; reports of seeking out sexually explicit Internet content (as opposed to accidental exposure); and, reporting lack of opportunity as the only reason for not having seen sexually explicit Internet content. These scores were summed to provide an index of adolescents' stated interest in sexually explicit content and behaviours around seeking out such content.

Media environment. An index called media environment was constructed to measure the number of media platforms to which each participant reported having access, the types of platforms, and where each platform was located (in the teen's bedroom, in the home, in other peoples' homes. These scores were summed to provide an index of the variety of media platforms that adolescents had access to in the home or community.

Restrictive parent mediation. An index called restrictive parent mediation was constructed to operationalize microsystem processes and contexts relation to restrictive parental behavior around media use. Participants were given a score based on: perceptions of household rules for specific media platforms; parental enforcement of rules; assessment of parent efficacy at keeping them away from adult –oriented Internet content; reports of perception of a family member checking their Internet history; and, perceptions of parental use of blocking technology for specialty television services and Internet. These scores were summed to provide an index of adolescents' perceptions of their parents setting rules for media use and prohibiting some kinds of viewing or media use.

Nonrestrictive parent mediation. An index called nonrestrictive parent mediation was constructed to operationalize microsystem processes and contexts in relation to nonrestrictive parental behaviour around media use. Participants were given a score based on: reports of frequency with which parents have discussed content on given media platforms; number of types of content parents have expressed concern about; assessment of parental competency discussing their views on certain types of content; reports of discussion-oriented rule enforcement; and reports of parents specifically discussing

Internet pornography with them. These scores were summed to provide an index of adolescents' perceptions of their parents' discussions with them about parental content concerns.

Parental education level was coded as a dummy variable (where a parent having a college or university degree=1 and no degree=0).

Procedure for Data Analysis

Descriptive statistics were calculated for each of the questionnaire items that were used to construct the indices to provide detailed data about adolescents in their home and community media environments. These descriptive statistics are included in this thesis because they contain information that has not been documented in previous research in Alberta.

Descriptive statistics were calculated for the indices. Then, to allow the researchers to see statistically significant differences in means between males and females and between urban and rural participants, two-by-two analysis of variance was conducted for each index to determine whether main effects were present. Main effects for gender were tested because of the disparity between boys' and girls' access to sexual content shown, but not fully explained, in the literature. The indices were also tested for main effects with geographic location to determine whether environmental forces (that may not be captured by the media environment index) might be playing a role in overall access to sexually explicit content or intervening variables. The literature does not address differences between urban and rural samples.

Bivariate correlations between the indices were then calculated to measure the strength and direction of relationships among the indices. Finally, the causal model was

tested to investigate which variables were the strongest predictors for intervening variables and for overall access to sexually explicit content.

CHAPTER IV: RESULTS

The research findings are discussed in this chapter. The sample is described, and descriptive statistics and analysis of variance are presented for key findings from questionnaire items and for each of the indices. Finally, a test of the causal model is presented.

Sample

Of the 1475 information packages that teachers reported sending home, 429 students received permission and participated in the study. This represented a 29% participation rate. Two hundred and forty-one girls and 161 boys (23 participants did not indicate their gender) from grade eight classes in a variety of subject areas in 17 schools across the province completed the *Adolescents and Restricted Media Survey.*

A greater number of rural schools were willing to accommodate the project with class time, but the student populations were smaller, resulting in 65% (n=271) of students from urban schools and 35% (n=154) from rural areas. This urban/rural split is not representative of the overall population of Alberta, which is around 80% urban and 20% rural (Statistics Canada, 2001).

Students ranged in age from 12 to 15 years with a mean age of 13.5 years. Less than 2% of the sample was 12 or 15 years of age with the remainder equally split between 13 and 14 year olds. Seventy-five percent of the sample lived in households where their parents lived together. Ten percent reported living with one parent exclusively, while 11% percent live with one parent and visit the other parent. Two percent spend equal time between two homes. Seventy percent of the sample reported that one or both parents had attended college or university.

Summary of Findings for Discrete Questionnaire Items:

Specific Behaviours and Environmental Characteristics

To provide detail about the bioecological paradigm for adolescent access to sexually explicit media, this section presents a summary of key findings from discrete questionnaire items. This level of detail is lost when these discrete items are combined to create indices to represent theoretical bioecological dimensions. Providing findings from key discrete variables makes it possible to build an "inventory" of behaviours, environmental characteristics, and beliefs that comprise various dimensions of the bioecolgical paradigm for Albertan adolescents, and allows for comparison with data from other studies. A detailed presentation of these findings is presented in Appendix K.

Access, interest, and contexts. A majority of the sample (74%) reported having seen pornography on the Internet. Slightly less than half (41%) reported having seen pornography on video or DVD. Just over half (57%) of the sample who had seen specialty TV reported having watched a show for "adults only" on at least one specialty TV platform.

Boys were more likely than girls to report having accessed pornography on the Internet, DVD and video, and specialty television, and more likely than girls to report having viewed such content multiple times on each type of media. Almost a quarter of boys (24%), compared to 4% of girls reported having seen pornographic DVD or video "too many times to count", and over a third of boys (35%, compared to 8% of girls) reported having seen pornographic Internet content "too many times to count". Rural participants were more likely than their urban counterparts to report having viewed pornography on DVD or video and viewing multiple times; 19% of rural participants

reported seeing pornographic video or DVD "too many times to count" compared to 9% of the urban participants.

Boys were more likely to state an interest in sexual content. Lack of interest was the reason most frequently reported by girls for not viewing pornographic content on DVD, video and the Internet, whereas boys most frequently reported that their reason for not viewing such content was due to parents not allowing it. Participants who stated a high level of interest in viewing sexual content also reported high frequencies for viewing sexually explicit content on video or DVD, reported having used multiple specialty TV platforms for viewing "Adult-Only" shows, and reported high frequencies of deliberate viewing of sexually explicit content on the Internet.

Of the participants who had seen pornography on the Internet, 60% had sought out the content deliberately at least once. Three quarters of the boys (75%) reported that they deliberately sought out sexually explicit content on the Internet, whereas just less than half (48%) of the girls reported deliberate seeking of out such content. Of the participants who had seen pornography on video or DVD, 11% of the boys and 2% of the girls reported renting the video or DVD themselves.

Participants who reported having seen pornography on video or DVD reported on how they were able to access it; 9% of the overall sample were able to watch it because someone over 18 had rented it; 6% had rented it themselves; 20% reported that it was available at someone else's' house.

Both boys and girls are both were significantly more likely to report having viewed sexually explicit content exclusively in a solitary context on the Internet than on video or DVD. When they accessed sexually explicit Internet content in a social context,

most girls reported having viewed with another girl, whereas most boys reported viewing such content with other boys (in pairs and groups). Significantly more boys than girls reported only having viewed sexually explicit content on video or DVD when they were alone, whereas significantly more girls reported having viewed with a group of friends. However, boys reported "getting together with friends" specifically to watch pornography on video or DVD significantly more frequently than girls did.

Rural boys reported the highest estimates of peer use of sexually explicit content, followed by urban boys, rural girls, and urban girls. According to data from this study, participants' estimates of their own peer groups' access are accurate in terms of ranking of frequency (rural boys do access the most sexually explicit content and urban girls access the least). Participants tended to estimate that levels of peer use of sexually explicit content on the Internet, DVD, and video were similar, although according to data from this study, access to sexually explicit content on DVD and video is substantially lower than on the Internet.

Media environment. Participants were asked to indicate which media platforms (from a list of 9) were present in their homes and bedrooms. The mean number of media platforms in participants' homes was 6.1, and in bedrooms it was 1.8. Boys had a mean of 2.2 media platforms and girls had a mean of 1.24 platforms in their bedrooms. Participants from urban homes reported having cable television and Internet connections in bedrooms more frequently than rural participants, whereas significantly more rural participants reported having satellite and pay per view television in their bedrooms. Neither geographic location nor gender was statistically significant for the number of platforms accessed in other people's homes.

Restrictive parent mediation. The majority (58%) of the sample reported that there are no rules in their home about what type of movies they can watch, or the rules are never enforced. Half (51%) of the sample reported that there are rules in their home about the types of movies they are allowed to watch, but only 13% of the sample reported that rules are enforced most or all of the time. One quarter of the sample reported that their parents never check age ratings on movies, and 13% reported that their parents always check the rating. Rural respondents were more likely than urban respondents to report that their parents never check age ratings.

Only 13% of respondents reported that blocking technology was used on either the computer or television, and only 4% reported blocking technologies on both media in the home. Rural boys are most likely to report that there is no blocking technology in use in their home, and urban girls are most likely to report that it is used in their home.

Slightly less than half of participants (41%) reported that someone checks their Internet history. Just over half (56%) of girls reported that they think adults do a good job of keeping them "away from adult-only stuff on the Internet" compared to 43% of boys.

Nonrestrictive parent mediation. Participants reported that their parents are more concerned with sexual content than any other type of content on all media platforms. Over half (60%) of participants reported that sexual content was their parents' biggest concern for Internet content, half (51%) reported that parents are most concerned about "adult-only" content on specialty television, and nearly half (47%) reported that sexual content was their parents' biggest concern for movie content.

Just over half (57%) of participants agreed with the statement "Adults do a good job explaining why there are certain movies they don't want me to watch". Almost half

(49%) of the sample reported that their parents had discussed online pornography with them. Urban boys (59%) were significantly more likely to report that their parents had discussed it than rural boys (37%). Only 12% of the sample reported that their parents have a discussion with them when they are caught breaking media use rules.

Descriptive Statistics and Main Effects for Indices

The following section summarizes descriptive statistics for the indices to allow the reader to get a detailed idea of the mean scores, standard deviations, and range of scores for each index (Table 3). Findings are presented for the analysis of variance for main effects for gender (Table 4) and geographic location (living in a rural area or an urban area—see Table 5) and possible interactions between the two. Main effects for gender were present for all of the indices except restrictive parent mediation. Main effects for geographic location were present for access to sexually explicit media and nonrestrictive parent mediation. There were no interactions between gender and geographic location for any of the indices.

Table 3

Mean Scores for Indices Predicting Access to Sexually Explicit Media

Index	Mean	Standard Deviation	Range of Scores
Access to Sexually Explicit Media	12.3	16.4	0-16
Interest in Sexual Content	4.4	3.1	0-8
Peer Influence	9	6.4	0-36
Media Environment	12.4	3.2	2-24
Restrictive Parent Mediation	6.1	3.8	0-16
Nonrestrictive Parent Mediation	7.6	4.2	0-21

Table 4

Means for Indices Predicting Adolescent Access to Sexually Explicit Media with Main Effects for Gender

Index	Mean			Range
	Males	Females		
Access to Sexually Explicit Media	21.5	7.2	(F (1, 398) =82.23, p< 0.001)	0-16
Interest in Sexual Content	5.7	3.6	(F (1, 390) =375.24, p< 0.001)	0-8
Peer Influence	11.7	7.3	(F (1, 379) = 45.16, p< 0.001)	0-36
Media Environment	13.0	11.9	(F (1, 398) =10.75, p< 0.001)	2-24
Restrictive Parent Mediation	6.2	6.0	(F<1, *ns*)	0-16
Nonrestrictive Parent Mediation	6.6	8.0	(F (1, 376) =9.89, p< 0.05)	0-21

Table 5

Means for Indices Predicting Adolescent Access to Sexually Explicit Media with Main Effects for Geographic Location

Index	Mean			Range
	Urban	Rural		
Access to Sexually Explicit Media	10.9	15.1	(F (1, 406) =6.1, p< 0.05)	0-16
Interest in Sexual Content	4.3	4.6	(F (1, 414) =2.1, *ns*)	0-8
Peer Influence	8.8	9.3	(F<1, *ns*)	0-36
Media Environment	12.4	12.3	(F<1, *ns*)	2-24
Restrictive Parent Mediation	6.2	6.0	(F<1, *ns*)	0-16
Nonrestrictive Parent Mediation	8.0	6.9	(F (1, 400) =6.8, p< 0.01)	0-21

The Microsystem and Bioecological Characteristics

Access to sexually explicit media index. This index assesses the amount of access to sexually explicit media content participants report having accessed on video and DVD and the Internet and the number of specialty TV platforms they have used to access "Adult-Only" shows. The scores could range from 0 to 54.

The overall mean for access to sexually explicit media was 12.3, with a range from 0 to 54, and a standard deviation of 16.4. Boys reported greater access (M=21.5) than girls (M=7.2). The standard deviation for the scores for males was 19.0, and 11.0 for females. Adolescents living in rural areas reported more access (M=16.5) than did those in urban centers (M=12.2).

Two-by-two analysis of variance revealed significant main effects for both gender ($F(1, 398) = 82.23$, $p < 0.001$) and geographic location ($F(1, 398) = 7.58$, $p < 0.01$) but no interaction between gender and geographic location ($F < 1$, ns).

Biopsychological Characteristics and Microsystem Dimensions

Interest in sexual content index. This variable represents participants' reported interest in sexual content, based on questions about content advisories, deliberate seeking out of sexually explicit content, and reasons for avoiding sexual content. Scores could range from 0 to 8, and the actual range was 0 to 8.

The overall mean for interest in sexual content was 4.4, and a standard deviation of 3.1.Boys reported greater interest in sexual content ($M = 5.7$) than did girls ($M = 3.6$). Two-by-two analysis of variance revealed a significant main effect for gender ($F(1, 390) = 375.2$, $p < 0.001$), but not for geographic location ($F < 1$, ns), and no interaction between gender and geographic location ($F < 1$, ns).

Peer influence index. This variable combines measures of participants' reported estimates of their peers' use of sexually explicit media and their reports of their own use of sexually explicit media in social contexts. The possible and actual range for scores on this index is from 0 to 36.

The overall mean for peer influence is 9, with a standard deviation of 6.4. Boys reported greater levels of peer influence ($M = 11.7$) than did girls ($M = 7.3$). The standard deviation for the scores for males was 7.1, and 5.1 for females. A two-by-two analysis of variance revealed a significant main effect for gender ($F(1, 379) = 45.16$, $p < 0.001$), but not for geographic location ($F < 1$, ns), on peer influence. There was no interaction between gender and geographic location ($F < 1$, ns).

Media environment index. This variable represents the complexity of media environments (in the home and friends' homes) to which adolescents have access. The possible range for media environment is from 0 to 24 and the actual range in the sample is from 2 to 24.

The overall mean is 12.4, with a standard deviation of 3.2. Boys reported having access to greater numbers of media platforms in their bedrooms, homes, and friends' homes (M=13.0) than did girls (M=11.9). The standard deviation for the scores for males was 3.5, and 2.9 for females.

A two-by-two analysis of variance revealed a significant main effect for gender ($F(1, 398) = 10.75$, $p < 0.001$), but not for geographic location ($F(1, 398) = 7.58$, ns), and no interaction between gender and geographic location ($F < 1$, ns).

Restrictive parent mediation index. This variable represents participants' perception of their parents' restrictive mediation of their media use (the ways in which parents set and enforce rules about their children's media use, including the use of blocking technology). The possible and actual range of scores for this variable is 0 to 16.

The overall mean for restrictive parent mediation is 6.1, with a standard deviation of 3.8. A two-by-two analysis of variance revealed no significant main effects for gender ($F < 1$, ns), or for geographic location ($F < 1$, ns), and no interaction between gender and geographic location ($F < 1$, ns).

Nonrestrictive parent mediation index. This variable represents participants' perception of their parents' nonrestrictive mediation of their media use (the ways in which parents discuss content, viewing choices, and values around viewing with their children). The possible and actual range for nonrestrictive parent mediation is 0 to 21.

The overall mean is 7.6, with a standard deviation of 4.2. Girls reported receiving more nonrestrictive mediation (M=8.0) than did boys (M=6.6). The standard deviation for the scores for males was 3.9, and 4.2 for females. Adolescents living in urban centers reported receiving more nonrestrictive parent mediation (M=7.9) than did those in rural areas (M=6.7).

A two-by-two analysis of variance revealed significant main effects for gender ($F(1, 376) = 9.89$, $p < 0.05$), and for geographic location ($F(1, 376) = 7.12$, $p < 0.05$), but no interaction between geographic location and gender ($F < 1$, ns).

Exosystem Dimension

Parent education. This variable indicates whether one or both of participants' parents had attended college or university. Of the 401 responses to this question (24 responses were coded "missing" as they were incomplete), 74% (n=294) indicated that one or both parents had attended college or university.

Relationships Among the Indices

Bivariate correlations among the indices were calculated separately for males and females because main effects for gender were present for all but one index. As shown in Table 6, correlations reveal significant relationships between access to sexually explicit media, peer influence, and interest in sexual content.

For males and females, access to sexually explicit media was strongly positively correlated with peer influence and with interest in sexual content. For males, there was a strong positive correlation between access to sexually explicit media and media environment. Access to sexually explicit media was strongly negatively correlated with both restrictive and nonrestrictive parent mediation for males. For females, there was a

weak negative correlation between both restrictive and nonrestrictive parent mediation and access to sexually explicit media. Access to sexually explicit media correlated negatively with parent education for females.

Peer influence was strongly positively correlated with interest in sexual content for males and females. Peer influence also correlated with media environment for males and females.

The strong positive correlation between restrictive and nonrestrictive parent mediation for males and females should be noted. The size of the correlation makes it clear that these are distinct parenting strategies.

Table 6

Correlations Matrix for Variables Predicting Access to Sexually Explicit Content

	1	2	3	4	5	6	7
			Males (n=161)				
1. Access to sexually explicit content	_						
2. Peer influence	.72**	_					
3. Interest in sexual content	.67**	.55**	_				
4. Media environment	.36**	.34**	.28**	_			
5. Restrictive parental mediation	-.46**	-.36**	-.32**	-.32**	_		
6. Nonrestrictive parental mediation	-.31*-	- .20*-	-.28*-	-.24**	.54**	_	
7. Parent education	*ns*	*ns*	*ns*	*ns*	.22*	.20**	_
			Females (n=241)				
1. Access to sexually explicit content	_						
2. Peer influence	.68**	_					
3. Interest in sexual content	.58**	.60**	_				
4. Media environment	.14*	.21**	*ns*	_			
5. Restrictive parental mediation	-.16**	-.20**	-.20**	*ns*	_		
6. Nonrestrictive parental mediation	-.13*-	- .15*-	-.13*-	-.15*	.54**	_	
7. Parent education	-.23**	*ns*	*ns*	-.16*	*ns*	.18**	_

Note. Only significant correlations are reported. * $p < .05$. ** $p < .01$. *** $p < .001$.

Testing the Causal Model

To test the hypothesized causal model, separate path models were constructed for males and females from a series of multiple linear regressions. Because of the vast differences in the frequency of access to sexually explicit media for males and females, and because of the significant differences in the patterns of correlations between other predictor variables for each gender, it was thought that variables of interest may affect boys and girls differently. Therefore, the path models were tested separately for males and females.

First, access to sexually explicit media was regressed on all predictors (peer influence, interest in sexual content, media environment, restrictive parent Mediation, nonrestrictive parent mediation, and parent education). Then, peer influence, interest in sexual content, and media environment were each regressed on restrictive and nonrestrictive parent mediation, and parent education. Finally, restrictive and nonrestrictive parent mediation were each regressed on parent education.

The causal model accounted for 60% of the variability in access for boys, and 50% of the variability in access for females (see Figures 4 and 5 at the end of this section).

Step 1: Access to Sexually Explicit Media Regressed on Predictors

Tables 7 and 8 show the results of this regression for males and females respectively.

Table 7

Standardized Regression Coefficients for Predictors of Sexually Explicit Media for Females (n=241)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	-0.00	-0.63	*ns*
Restrictive Parent Mediation	-0.01	-0.21	*ns*
Media Environment Index	-0.01	-0.28	*ns*
Interest in Sexual Content	0.28	4.66	$p<0.001$
Peer Influence	0.49	8.01	$p<0.001$
Parent Education	0.18	3.74	$p<0.001$

F (6,207) =36.81, $p<.001$, R=.72, Adj. $R^2=.50$

Table 8

Standardized Regression Coefficients for Predictors of Sexually Explicit Media for Males (n=61)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	0.00	0.00	*ns*
Restrictive Parent Mediation	-0.16	-2.28	$p<0.05$
Media Environment Index	0.14	2.39	$p<0.05$
Interest in Sexual Content	0.36	5.39	$p<0.001$
Peer Influence	0.41	5.99	$p<0.001$
Parent Education	0.04	0.73	*ns*

F (6,115) =37.51, $p<.001$, R=.81, Adj. $R^2=.64$

As predicted, peer influence and interest in sexual content accounted for the most variation in access to sexually explicit media for both males and females. Peer influence accounts for slightly more variance in access to sexually explicit media for girls (33%) than for boys (30%). Interest in sexual content accounted for slightly less variance in access to sexually explicit media for girls (16%) than for boys (23%). Media environment was only significant as a predictor for access to sexually explicit media for males, accounting for 5% of the variation. Interestingly, parent education level had a direct influence on and access to sexually explicit media for girls, accounting for a small amount in girls' overall access to sexual content.

Step 2: Peer Influence Regressed on Predictor Variables

Nonrestrictive parent mediation and restrictive mediation were hypothesized to have a negative effect on peer influence, and parent education was hypothesized to have no effect on peer influence. Tables 9 and 10 show the results of this regression for females and males respectively.

Table 9

Standardized Regression Coefficients for Predictors of Peer Influence for Females (n= 241)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	-0.05	-0.63	*ns*
Restrictive Parent Mediation	-0.16	-2.04	$p<0.05$
Parent Education	0.02	0.30	*ns*

F (3,212) =2.84, $p<.05$, R=.20, Adj. $R^2=.03$

Table 10

Standardized Regression Coefficients for Predictors of Peer Influence for Males (n=161)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	-0.07	-0.66	*ns*
Restrictive Parent Mediation	-0.32	-3.09	$p<0.01$
Parent Education	0.00	0.03	*ns*

F (3,120) =5.97, $p<.001$, R=.36, Adj. $R^2=.11$

Contrary to the prediction, nonrestrictive mediation was not a significant predictor for peer influence for males or females. However, restrictive parent mediation was a significant predictor, explaining 11% of the variation for peer influence for males and 3% of the variation for females. As predicted, parent education was not a significant predictor for peer influence; however it had a direct effect on access to sexually explicit media for females that had not been predicted.

Step 3: Interest in Sexual Content Regressed on Predictor Variables

Nonrestrictive mediation was hypothesized to have a negative effect on interest in sexual content, and restrictive mediation was hypothesized to have a positive effect on interest in sexual content. Parent education was hypothesized to have no effect on interest in sexual content. Tables 11 and 12 show the results of this regression for males and females respectively.

Table 11

Standardized Regression Coefficients for Predictors of Interest in Sexual Content for Females (n=241)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	-0.03	-0.35	*ns*
Restrictive Parent Mediation	-0.18	-2.26	$p<0.05$
Parent Education	0.00	0.01	*ns*

F (3,215) =2.86, $p<.05$, R=.20, Adj. R^2=.03

Table 12

Standardized Regression Coefficients for Predictors of Interest in Sexual Content for Males (n=161)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	-0.22	-2.15	$p<0.05$
Restrictive Parent Mediation	-0.21	-2.09	$p<0.05$
Parent Education	0.04	- 0.42	*ns*

F (3,124) =6.62, $p<.001$, R=.37, Adj. R^2=.12

As predicted, nonrestrictive parent mediation was negatively related to interest in sexual content for males, explaining 6% of the variation. However, for females, nonrestrictive parent mediation was not a significant predictor for interest in sexual content. Counter to prediction, restrictive parent mediation was negatively related to Interest for males, explaining 6% of the variation, but was not a significant predictor for females. Parent education was not a significant predictor for interest in sexual content for males or females.

Step 4: Media Environment Regressed on Predictor Variables

Restrictive mediation, nonrestrictive mediation, and parent education were hypothesized to have no statistical significance as predictors of media environment. Tables 13 and 14 show the results of this regression for males and females respectively.

Table 13

Standardized Regression Coefficients for Predictors of Media Environment for Females (n=241)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	-0.15	-1.86	p=0.06
Restrictive Parent Mediation	-0.01	-0.14	*ns*
Parent Education	0.09	1.33	*ns*

F (3,217) =2.60, p<.05, R=.19, Adj. R^2=.02

Table 14

Standardized Regression Coefficients for Predictors of Media Environment for Males (n=161)

Independent Variables	*B*	*t*	Significance
Non-restrictive Parent Mediation	-0.19	-1.83	p=0.07
Restrictive Parent Mediation	-0.19	-1.85	p=0.07
Parent Education	- 0.07	- 0.85	*ns*

F (3,127) =4.93, p<.01, R=.32, Adj. R^2=.08

As predicted, parent education was not a significant predictor of media environment. Counter to prediction, nonrestrictive parent mediation explained a small amount of the variation in media environment for males and females. In addition,

restrictive mediation predicted a small amount of variation in media environment for males.

Step5: Restrictive Parent Mediation Regressed on Parent Education

Restrictive parent mediation was regressed on parent education. Parent education was expected to have had a negative effect on restrictive parent mediation. Tables 15 and 16 show the results of this regression for males and females respectively.

Table 15

Standardized Regression Coefficients for Predictors of Restrictive Parent Mediation for Females (n=241)

Independent Variable	*B*	*t*	Significance
Parent Education	0.00	0.09	*ns*

F (1,222) =0.01, *ns*, R=.01, Adj. R^2=0

Table 16

Standardized Regression Coefficients for Predictors of Restrictive Parent Mediation for Males (n=161)

Independent Variable	*B*	*t*	Significance
Parent Education	- 0.20	- 2.35	$p<0.05$

F (1,134) =5.52, $p<0.05$, R=.20, Adj. R^2=.03

As predicted, there was a small but statistically significant negative relationship between parent education and restrictive parent mediation for males, and no significant predictive relationship for females.

Step 6: Nonrestrictive Parent Mediation Regressed on Parent Education

It was expected that parent education would be negatively associated with nonrestrictive parent mediation. Tables 17 and 18 show the results of this regression for males and females respectively. Although parent education level emerged as a trend in predicting nonrestrictive parent mediation for females, it did not reach conventional levels of statistical significance (p= .08). Parent education level was a statistically significant predictor of nonrestrictive parent mediation for males, but only explains 2% of the variation.

Table 17

Regression of Parent Education on Non-restrictive Parent Mediation for Females (n=241)

Independent Variable	*B*	*t*	Significance
Parent Education	- 0.11	- 1.74	*ns*

F (1,229) =3.02, p=.08, R=.11, Adj. R^2=.01

Table 18

Regression of Parent Education on Non-restrictive Parent Mediation for Males (n=161)

Independent Variable	*B*	*t*	Significance
Parent Education	- 0.18	- 2.15	p<0.05

F (1,145) =4.62, p<0.05, R=.18, Adj. R^2=.02

Summary of Causal Model Results

Analysis basically confirmed the hypothesized causal model for boys, with the odd non-predicted finding. However, analysis only partly confirmed the hypothesized model for girls.

As hypothesized, parent education level negatively influenced both types of parent mediation behaviours for boys, but only affected nonrestrictive mediation for girls. Parent education level had a modest direct effect on girls' overall access to sexually explicit content, which had not been hypothesized.

Nonrestrictive and restrictive mediation both negatively affected the media environment for boys, but had no such effect for girls. Restrictive mediation had a negative effect on girls' and boys' interest in sexual content and their levels of peer influence, indirectly affecting overall access to sexually explicit. Nonrestrictive mediation had a modest negative effect on interest in sexual content for males, , but no such effect for girls. Restrictive mediation directly affected overall access to sexually explicit content for boys.

As hypothesized, peer influence and interest in sexual content had the most influence on boys' and girls' overall access to sexually explicit content.

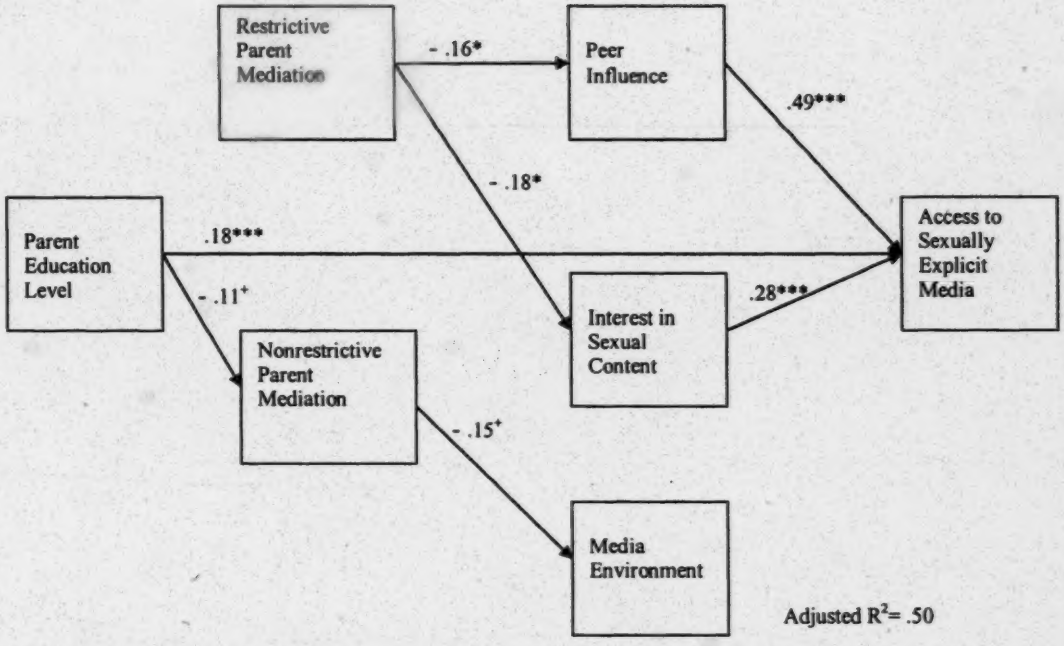

Figure 4. Causal model depicting significant paths in the ecosystem for females.

$^{+}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

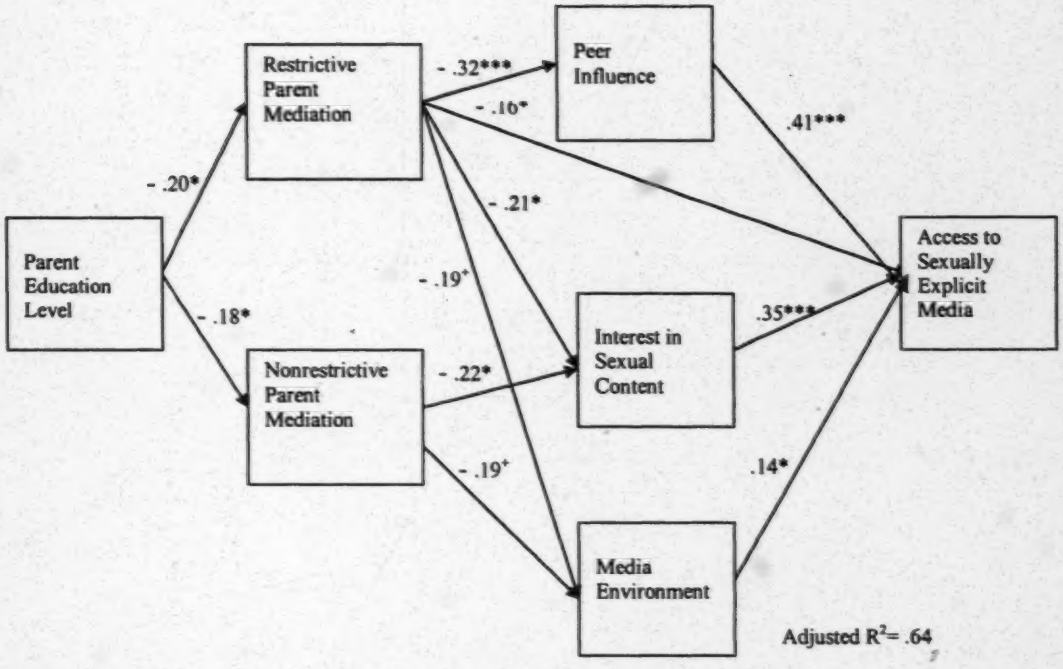

Figure 5. Causal model depicting significant paths in the ecosystem for males.

$^{+}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Summary of Major Findings

This study revealed gender differences around specific behaviours and specific media. Boys had higher rates of access on all media platforms, and reported much higher frequencies for deliberate access as well as unintended exposure. Boys reported far more solitary use of sexually explicit content more than girls, and boys also structure social time around using sexually explicit media, whereas girls do not, reflecting the findings in the literature around the social, not necessarily sexual, function of sexually explicit materials.

Boys have higher estimates of peer use than girls do, which is an accurate assessment based on the data, and also consistent with the literature. Boys reported having access to more media platforms than girls do in their homes, bedrooms, and friends' homes. Boys are less likely to think that adults do a good job of keeping them away from adult oriented Internet content.

Interestingly, there were no significant gender differences for reporting perceived level of parent concern about adult content on specialty TV, monitoring Internet history files, and how parents react to their child breaking media use rules. However, girls were more likely to report that their parents' chief content concern is sexual content. Parents of girls were more likely to communicate multiple areas of concern about Internet content. Boys were far less likely to report that their parents had communicated the content area that concerned them most for movies and Internet. More research is needed to investigate whether certain parent behaviours may be motivated by the gender of their child, whether parents communicate differently with children of different genders, and whether male and female adolescents perceive the communication differently.

Some differences between rural and urban boys were statistically significant where no differences were present between urban and rural girls. Rural participants, particularly boys, experienced higher levels of access to sexually explicit media than their urban counterparts. Rural participants also experienced significantly less nonrestrictive mediation. Urban girls received the most nonrestrictive parental mediation, followed by rural girls, urban boys, and finally by rural boys, with the lowest reports.

Rural boys had the highest overall access to sexually explicit content on video, DVD, specialty TV and the Internet. Rural boys had the highest reports of specialty TV services in their bedrooms and reported the highest estimates of peer use of sexually explicit media. Rural boys and girls reported significantly more frequent use of sexually explicit video and DVD: 19% of rural participants reported seeing sexually explicit DVD content "too many times to count" whereas only 9% of the urban participants did so.

Rural participants were more likely to view sexually explicit specialty TV content via satellite television whereas urban adolescents were more likely to view such content on digital television. Rural participants were more likely to report that parents never check on the content of movies they rent or buy. Rural boys are least likely to report the use of any kind of blocking technology for TV or Internet in their homes, whereas rural girls are the most likely group in the sample to report that such technology is being used.

These differences based on geographic location indicate that rural boys are given greater independence than their urban male or rural and urban female counterparts with their media access. It may also indicate that sexually explicit content is more readily available on the types of media found in rural homes. High rates of access to sexually explicit content by rural adolescents in Alberta is not accompanied by discussion about

the behaviour—rural boys report the lowest levels of parents discussing online pornography with them (37% compared to 59% of urban boys).

The Causal Model

The causal model operates differently for boys than it does for girls. For boys, access to sexually explicit media content was predicted directly by four variables: peer influence, interest in sexual content, media environment, and restrictive parent mediation. For girls, access to sexually explicit media content was directly predicted by three variables: peer influence, interest in sexual content, and parent education. Interestingly, media environment had no predictive power for girls' access to sexually explicit media content.

Indirect effects on access to sexually explicit media content for boys were more complex than for girls, but there were important similarities between these mesosytem relationships for each gender (see Figure 6). For boys and girls, restrictive parental mediation had a negative effect on peer influence and interest in sexual content --the two most powerful direct predictors of access to sexually explicit content for boys and girls.

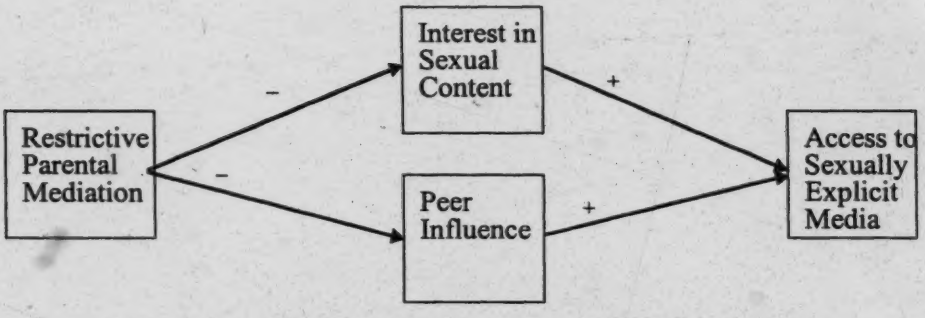

Figure 6. Mesosystem relationships that are similar for boys and girls.

Key Findings Consistent With the Literature

Boys reported more access to sexually explicit content than girls on all media platforms—88% of boys had seen sexually explicit Internet content compared with 72% of girls, and 60% of boys had seen sexually explicit video or DVD compared to 27% of girls. Both boys and girls reported high estimates of peer use of sexually explicit content on video and DVD and the Internet. Adolescents made high estimates of their peers' deliberate use of sexually explicit media, and significantly overestimated peer use of sexually explicit content on DVD and video. However, they made accurate estimates in terms of ranking by gender.

Media saturated homes were the norm for the sample, consistent with current North American studies. Adolescents reported a mean of six electronic entertainment media platforms available to them at home, and a mean of five media platforms used in the homes of friends. Just over 90% of participants reported an Internet connection at home, three quarters had a DVD player in the home, and about one third reported having specialty television services. Adolescents reported a mean of two types of electronic entertainment media platforms in their bedrooms, the most common being television,

computer or video game platforms, VCRs, and cable TV connections. Internet connections were more common than DVD players in bedrooms. Boys reported having more media platforms in their bedrooms than girls.

Consistent with the literature a majority of the sample reported that there were no household rules around the types of movies they were allowed to watch, and those who had rules reported that they were rarely enforced. Rural respondents reported the lowest levels of parental monitoring of movie content. Very few participants reported that blocking technologies were in use for television services or on the computer in their homes—only 16% of the sample knew that they had such technology in use in their homes. Only 17% of the sample reported knowing that someone checks their Internet history.

Sexual content was reported as parent's main content concern for all media platforms, which is consistent with the literature. However, a large minority of participants reported that their parents had not told them what type of content concerns them. Girls had higher reports of parental concern with sexual content, and boys were more likely to say their parents hadn't told them what they are concerned about. Almost half of the sample reported that their parents had discussed online pornography with them.

CHAPTER V: DISCUSSION

The purpose of this research was to identify the personal characteristics, environmental factors, and family and social dynamics that affect adolescent access to sexually explicit media, and to identify overarching patterns of adolescent use of and exposure to sexually explicit media content.

Prior to this study, nothing was known about Alberta adolescents' access or exposure to sexually explicit media content. This study was able to explain 60% of the variation in access to sexually explicit media for boys, and 50% of the variance for girls. In addition, several of the areas of investigation in this study have not been studied previously.

This section presents new contributions to the literature in the nascent field of adolescent access to sexually explicit media content, and the significance of the findings for the current study on the application of human ecological theory to the study of adolescent use of sexually explicit media. Finally, the findings are discussed in relation to policy makers, educators, parents, and adolescents in Alberta.

New Contributions to the Literature

This study is significant because of the very high rates of exposure to sexually explicit content reported by the sample on a variety of media platforms. Compared to findings from other published studies, contemporary Alberta adolescents have higher access to sexually explicit content than their counterparts in the US, Australia, Northern and Western Europe and South Asia. However, the data collection for some of the previous studies was gathered prior to the collection of data for this study, using different methods, so it is difficult to make comparisons. The majority of this sample had accessed

sexually explicit media, on the Internet more so than any other media platform. Three-quarters of this thirteen and fourteen year old sample had seen sexually explicit Internet content, and they reported much higher rates of deliberate use of sexually explicit content on the Internet than their counterparts in other countries. Three-quarters of boys from Alberta who had seen sexually explicit content online reported deliberate seeking out of such content, and almost half of girls did so. This comparatively high level of reported access might be attributed in part to three factors; the age of the data in the current literature; the data collection method of the anonymous questionnaire; and, the saturation of Internet access in the homes in the study (which is reflective of Alberta's very high rates of home Internet access for the general population).

Previous studies have not pursued differences between urban and rural adolescent's use of sexually explicit media. Given that little is known about urban and rural differences in rates of use from other places, the researcher decided to test for them in the data analysis. This study found that there are no statistically significant differences between urban and rural participants accessing sexually explicit Internet content, most likely due to the high saturation of Internet connections in homes across the province. It was also found that rural boys reported significantly higher levels of access to sexually explicit video and DVD and than their urban male and urban and rural female counterparts, and such findings have not been documented before. The accuracy of the ranking of estimates of peer access to sexually explicit media was accurate in reflecting these geographic findings (i.e. rural boys have the highest exposure and rural boys made the highest estimates of peer use, urban girls have lowest exposure, made lowest estimates of peer use).

In addition, this study contributes the finding that in Alberta, although the *types* of media platforms in urban and rural homes differed, there was no significant difference in the *number* of platforms in the homes of participants.

Previous studies on access to sexually explicit media have not taken into account the media that adolescents access in social settings. A significant finding from these data is that the number of platforms accessed in friends' homes did not vary across the sample. This creates a "level playing field", creating venues for access to a variety of platforms in friends' homes regardless of the individual's home media environment. In effect, a large communal media environment is created where most adolescents have access to most types of media platforms socially.

Previous studies have not investigated social patterns of use of sexually explicit media content by adolescents. This study found that exposure to sexually explicit Internet content happened more frequently in solitary rather than in social settings, which may be accounted for in part by accidental exposure or a wish for privacy with deliberate use. Social use of sexually explicit Internet content happens most often in same-gender dyads or groups. Boys and girls reported different patterns of social and solitary use of sexually explicit content. Girls were more likely to view sexually explicit content on video or DVD in a social rather than a solitary context, whereas boys were more likely to have viewed video and DVD in a solitary context and also specifically organized social time around such viewing, behaviours that girls engaged in very rarely. These additional patterns of use reported by boys help to explain the much higher frequency of use.

New information has been generated about adolescent access to sexually explicit content on media other than the Internet, a significant contribution to the scant body of

knowledge. Previous studies that compare use on a variety of media have a large age range and provide little detail. The current study provides specific detail about the ways that 13 and 14 year olds access sexually explicit content on video and DVD, specialty television, and the Internet. These findings allow for comparison of rates of viewing on different platforms with a very specific age group. Given how little is known about adolescent access to sexually explicit video, DVD, and specialty television content, these findings make a unique and important contribution to the body of knowledge around these behaviours.

Just under half of the sample reported seeing sexually explicit content on video or DVD. The most common means of access was attributed to the video or DVD being available at someone else's house. Nine percent of the overall sample was able to watch it because someone over 18 had rented it, and 6% had rented it themselves. Boys and rural participants were more likely to report having viewed pornography on DVD or video and viewing multiple times. Just over half of adolescents with access to specialty television services (satellite, digital, pay per view, direct to home video) reported accessing shows "for adults only" on those media; rural participants were more likely to view such content on satellite TV, whereas urban adolescents were more likely to view it on digital TV.

This study used a human ecological theoretical framework and contributes to the application of human ecology theory for the study of media use in a family context as well as to the general literature on adolescent access to sexually explicit media. This is noteworthy, considering that very few published studies on adolescent access to sexually explicit media use a theoretical framework. The majority of the literature is comprised of

exploratory or descriptive survey research that does not present findings in a theoretical context.

Implications for the Human Ecology Theoretical Framework

This study used a human ecological theoretical framework to examine adolescent access to sexually explicit media to move the inquiry beyond simply a survey on rates of access to include intervening contexts and processes that link environmental conditions or processes to outcomes of exposure and access to such content.

Bronfenbrenner theorized that when a bioecological paradigm-- a system that accounts for the form, power, content and direction of the proximal processes effecting development--is expressed in the form of concrete hypotheses, they can be subject to empirical test (1995). Based on human ecological theory, relationships between ecological dimensions were predicted, and then tested in the path model. Biopsychological dimensions and microsystem interaction with peers were found to have the strongest predictive power for access to sexually explicit media. Two direct relationships to overall access to sexually explicit media from the exosystem and the microsystem were found, revealing relationships between ecological dimensions that had not been predicted. Interestingly, predictions based on human ecological theory were more accurate for boys than for girls.

Relationships Between the Exosystem and the Mesosystem

For girls, the only relationship between the exosystem and the mesosystem was a direct effect on their access to sexually explicit content (from parent educational level), which was not predicted. The direct positive relationship between parent education level and girls' access to sexually explicit media might be explained by some research that

identifies adopters of new media technologies as highly educated and more likely to be opposed to censorship (Atkin, 1997; Thompson, Chaffee, & Oshagen, 1990). However, more research is needed to fully explain this relationship.

For boys, the only relationship between the exosystem and the mesosystem was a direct effect on parent behaviour, as predicted, which in turn, had both direct and indirect effects on their access to sexually explicit content. Higher parent education reduced both types of mediation for boys, which was an unexpected finding.

This study affirms Bronfenbrenner's recognition of the complex role of media in the family context, placing television as "a second-order effect…operating not completely within a microsystem but rather across ecological borders as an exosystem phenomenon" (1979, p.242), although he may have never imagined that television based technologies would bring such an array of sexually explicit content into homes. Although the exosystem dimension of the sexually explicit content environment was not operationalized in this study, the interaction between the sexually explicit content environment and most of the mesosystem variables included in the model shows that this exosystem dimension, does, indeed, operate across ecological borders.

Relationships Within the Mesosystem

Mesosytem models involve research designs that identify the influences operating, in both directions, between the principal settings in which human development occurs (Bronfenbrenner, 1986). Atkin (2001) identifies "the child's relations among home media environments" as a mesosystem dimension (p.51). The test of the causal model illustrated that peer group relationships and individual characteristics are the two

strongest predictors of access to sexually explicit media, and enabled a comparison to other mesosystem relationships.

The test of this model confirmed the prediction that adolescent's relationships among peers are the most important of their relationships among media as a predictor for access to sexually explicit content. According to Bronfenbrenner, environmental events that are the most immediate and potent in affecting a person's development are activities engaged in by others with that person or in her presence. Active engagement in, or even mere exposure to, what others are doing often inspires the (developing) person to undertake similar activities on her own (1979). Peer influence was the strongest predictor for access to sexual content, regardless of any other factors in the near environment.

Testing the causal model confirmed the prediction that a biopsychological variable, interest, was a strong predictor variable. Atkin (2001) theorized that the ontogenic (biopsychological) system is the most promising line of research for children's media use, and the test of this causal model showed that biopsychological dimension variables --interest in sexual content and peer influence-- had the most predictive power for access. Bronfenbrenner theorized that biopsychological dimensions could be examined as sources of variation in the person's susceptibility to the developmental effects of environmental conditions and of proximal processes. This theoretical notion was supported by the strong predictive power of interest in sexual content and peer influence.

Moreover, gender is an ontogenic/biopsychological variable that was important not only in predicting overall access to sexually explicit content but also in moderating

the impact of other variables, most specifically the media environment and parent mediation. This was evident in the causal models.

Parenting behaviours affected microsystem and biopsychological variables differently for boys and girls. For girls, only restrictive parent behaviour, (not both types of parental mediation, as predicted) affected intervening variables (peer influence and interest in sexual content). For boys, restrictive parent behaviour had a modest direct effect on access to sexually explicit media and a negative effect on peer influence. For boys, both types of parent mediation had a negative effect on interest in sexual content.

Bronfenbrenner (1986) cited research using mesosytem models that identified processes, such as parental monitoring, that affected undesirable behaviour by children with their peers, and processes that account for children's susceptibility to peer influence. Restrictive parent mediation behaviours reduced peer influence, more so for boys then for girls, but the effect was modest. The test of this model showed limited effectiveness for parent mediation as a direct influence on access to sexually explicit media, but especially for boys, the most important functions of parent mediation may be reducing interest in sexual content and peer influence.

Atkin's research found that the pervasiveness of adult oriented content in new media outlets did not prompt greater mediation in subscriber households (2001). He identified the need in the new media environment for parents to replace social system controls, such as indecency laws on traditional television broadcasts, to prevent children's access to restricted content; in other words, an exosystem dimension that had once mediated for parents no longer functions effectively due to the changes in media technology. To use media technology to help them mediate, such as blocking software or

blocking mechanisms for specialty television, parents must actively employ the technology within the home. Atkin acknowledged that making parental mediation the "last line of defense" places pressure on the microsystem interactions between parents and children. This pressure is reflected by the paradoxical findings from this study of high perceived parental concern about sexual media content, but ineffective parent mediation, and might be explained not only by parents lacking mediation skills, but also by the media environment of Alberta adolescents and the degree to which they have access to a wide variety of media platforms in their bedrooms, at home, and in friend's homes, out of the purview of parental influence.

Counter to prediction, no variables had statistically significant effects on the media environment, although there was a trend from parent education level for girls and from both types of parent mediation for boys. This may indicate that despite variation in the number and types of media platforms located in homes or bedrooms of participants, the media used in other people's homes results in a communal media environment that is constant for adolescents regardless of other variables in their environment. Although it was predicted to positively affect access to sexually explicit media, the media environment did not have an effect on access to sexually explicit media for girls, and only a very modest positive effect for boys.

The test of this causal model revealed that parent education level, an exosystem variable, had a weak positive effect on girls' access to sexually explicit content in some way other than through parent behaviours or media environment. It also showed that parent education level affected both types of parenting for boys, but not for girls. In addition, restrictive parenting and media environment have a weak positive direct effect

on access to sexually explicit behaviour for boys. Finally, the test revealed that no variables in the ecological model affected the overall media environment statistically, and for both boys and girls, peer influence and interest were the strongest predictors for access to sexually explicit media. All of these findings were opposite to what was expected.

One of the strengths of this research is that it employs Bronfenbrenner's scientific conception of ecological validity (1979), collecting data from the adolescents about their environment as they perceive it and respecting their anonymity. Future research comparing parent reports of their perceptions of their children's media use and their own mediation, with child reports would reveal much about the nature of ecological validity in the context of family media use.

The Macrosystem--Normalized Behaviours in the Sample

Exploratory research using a bioecological model lends itself to generalizing about patterns of microsystem findings as overarching patterns of ideology and normalized behaviours for this subgroup (macrosystem dimensions). This study revealed how sexually explicit content, as an exosystem variable, interacted with other ecological dimensions to illustrate some elements of the macrosystem.

Patterns of access are different for boys and girls and somewhat different 0s for urban and rural adolescents, but overall access to sexually explicit content is high, particularly on the Internet. The findings document the cultural norm for adolescents to live in media saturated homes and to have ready access to a variety of platforms in their communities. There appears to be a norm for adolescents who are interested in sexual content to seek it out deliberately on the Internet. Social use of sexually explicit content

is a common experience for boys and girls. There appears to be a norm among a small minority of boys to structure social time around sexually explicit pornographic video and DVD. In addition, a small minority of boys reports very frequent use of sexually explicit video and DVD.

The human ecological framework was an excellent tool for research that goes beyond conventional demographic predictors to fully reflect media use in today's complex media environment. This study provides support to past findings on human ecological research on media use in a family context and contributes unique findings about the bioecological model for adolescent access to sexually explicit media. Currently, there is no established theoretical framework for the study of adolescent access to sexually explicit content, but given the specificity with which this casual model describes the processes and contexts affecting adolescent use of sexually explicit media, the human ecological approach is well suited to further, more detailed investigations. Ongoing research would allow for documentation of changes in all areas of the bioecological model over time and at different ages and stages of children's development. Such research is necessary to complement urgently needed research on developmental effects of sexually explicit media use.

Implications of the Current Research

Implications for Media Regulators, Media Industry, and Government Policy Makers

> "More than any other setting, the exosystem influences and is influenced by public and private policy decisions, especially where the media are concerned"
>
> (Atkin, 2001, p.52).

In human ecological terms, the sexually explicit content environment as an exosystem variable influences policy, and is in turn, influenced by policy. However, given the nature of these findings (high rates of use of sexually explicit media by young adolescents), contemporary media product providers and regulators do not seem to be aware of, or have not established business practices based on current age-based demographic patterns of use for their products. Digital, specialty TV and pay per view content providers appear to be ignoring the needs of their customers who are parents and could use more explicit guidance around using blocking techniques for the channels that come into their homes. Almost on tenth of teenagers in the current study reported buying or renting sexually explicit product. Are retailers are profiting from adolescent use of sexually explicit media? The adolescent reports of such behaviour in this exploratory study need to be followed up by distributors, retailers, and regulators.

Investigating the processes involved in adolescent interaction with sexually explicit content environments has implications for policy makers. Because the content environment is so flooded with sexually explicit content, adolescent exposure to such content is almost an ubiquitous experience for Alberta adolescents. The task of regulating media content in the home has become the exclusive responsibility of parents. However, as the exosystem dimension of mediation from the content provider has changed, nothing as effective has replaced it. There are few systematic social supports to guide parental mediation of content, (which is, in its own right, a parenting skill), and technological options are apparently not being effectively implemented in homes. The literature shows that adolescents often know more about media technologies than their parents. Parent

resources may be spread thin in media saturated households where viewing is highly individualistic. Families using media together is not the norm for teens.

Effective policy cannot be made without adequate research, and research around a variety of issues relating to regulating sexual content and supporting parents as consumers and citizens is needed. Research is needed with parents to find out to what extent they would like help in regulating sexually explicit media to their children. The findings from this research showed that parents may not be effectively communicating their concerns around content to their children, but when they do their children's exposure to sexual content is their area of most concern. Policy makers and media providers need to do supporting research with parents to find out if they are content with current degree of adolescent access to sexually explicit media in Alberta. This finding is of key importance to supporting parents as consumers and as citizens.

It is imperative that the issue of adolescent access to sexually explicit content move to the fore in the public discourse with government and industry media regulators, given that they are the only well- resourced institutions who can conduct research and reach out to parents on a mass basis with media management skills, techniques, messages. Industry content providers should proactively engage subscribers who are parents with strategies for limiting the types and channels of sexually explicit content that comes into their homes.

The results of this study should encourage government and media industries to conduct their own research as soon as possible into adolescents as consumers of sexually explicit content on various media platforms. Use of this study as a crude baseline measure for adolescent access to sexually explicit media content ensures a gap of at least

five years between data collection for this study and any new research initiative asking similar questions of adolescents—a five year gap that may have serious consequences for adolescent sexual health. Unfortunately, such consequences cannot be accounted for unless research into this area is conducted.

There is a need for industry and government collaboration on ongoing programs of research around: motivations for different types of parent mediation of restricted content for their children to guide the design of parent education programs; research into the effectiveness of parent education campaigns; and, research into the effectiveness of blocking technologies for Internet and specialty television. This type of research could provide evidence-based background for effective policy making and marketing strategies, especially around services and supports for parents. Given that research into the developmental effects of exposure to sexually explicit media for adolescents is not conclusive, helping parents regulate media effectively would help parents make choices around their children's media use based on their own values systems.

Implications for Educators

Nonrestrictive parent mediation has been proven by this study to make a difference in boys' interest in sexual content and their reported levels of peer influence around use of sexually explicit content. This study shows that discussion in the home helps to reduce peer influenced around and curiosity about sexually explicit content. This finding begs the question "Why not try discussion of sexually explicit media in classrooms?" based on these results, sexual health education teachers should be encouraged through curricular guidelines to discuss laws, engage in values clarification, and allow adolescents to find common ground through discussion about how they feel

about being captive audiences to sexually explicit media content. Health teachers should be encouraged to discuss the theatrical, profit-driven aspects of the sexually explicit media industries and the role of adolescents as consumers. Deconstructing sexualized images and teaching critical thinking skills about media content are basic skills that should be mastered by preservice teachers.

Teachers should be encouraged to provide discussion about sexualized media in different subject areas including social studies, language arts (media education is mandated in the Alberta course of studies), and teachers should be encouraged to initiate discussion of sexually explicit media content in different contexts, particularly in CALM (Career and Life Management) and in any discussions of safer sex techniques that are part of the program of studies. Access to sexually explicit media content must be seen as a ubiquitous experience for most adolesescents and therefore, must be taken seriously as an influence and a topic for discussion and values clarification.

Implications for Parents

It may be disheartening to parents who would like to limit their children's exposure to sexually explicit material that the two strongest predictor variables for their access to such content—peer influence and interest in sexual content--are largely outside of parental purview. However, this research showed that both types of parental mediation do make a slight difference in overall access to sexually explicit media, both directly (for boys) and indirectly (for boys and girls).

Households in Alberta with adolescent children are facing a crisis of sorts around their children's media use. Parents in Alberta and throughout the developed world express a lot of concern over their children's exposure to sexual content. Yet, there is a

distinct lack of effective parental mediation taking place in homes. Parents continue to provide media saturated environments for their adolescent children, homes where parents are concerned but ill equipped to mediate new technologies. Often, children know more than their parents about how to use the media in the home. In many cases adolescents have unfettered, and sometimes unwanted, access to sexually explicit media at home or in the homes of their friends.

Studies reveal ubiquitous adolescent rule breaking, adolescent facility with overriding and outsmarting blocking technologies, and a reluctance to report experiences with upsetting sexual content to their parents. Differences between parent and child reports of parent mediation behaviours are consistent throughout the literature.

In Alberta, it is *not* the norm for 13 and 14 year olds to perceive that there are rules around their media use. Only half the sample reported rules in the home about movies they are allowed to watch, and only 60% of those respondents reported that those rules are enforced. Yet the results of this study show that setting and enforcing rules, along with other restrictive mediation behaviours such as checking Internet histories, consistently checking movie ratings, and using blocking technologies do make a difference for boys' and girls' overall exposure to sexually explicit content. When adolescents perceive that there are restrictive mediation techniques happening in the home, they express less interest in sexual content and report less peer influence, leading to a reduction in overall exposure to sexually explicit content.

Findings from studies conducted with adolescents on four continents (including this study) show remarkable consistency in the meager amounts of discussion between adolescents and parents about sexual media content. Nonrestrictive parenting techniques,

such as discussion about sexually explicit content, make a difference for boys in overall exposure to sexually explicit content by contributing to lower rates of expressed interest in sexual content, peer influence over their viewing habits, and the degree to which they report a wide variety of platforms in their media environments at home and in friends' homes. This is the first Canadian study to date that indicates there is at least some discussion between parents and adolescent children about pornography. Almost half the sample reported that some discussion had occurred in the home. Urban boys were significantly more likely to state that their parents had talked to them about pornography than rural boys.

The literature and this study suggest that silence around sexually explicit content actually piques adolescents' curiosity, leading to higher rates of use of sexually explicit content fuelled by a desire for language and imagery around sex. Parents should consider seriously the importance of their own discussions with their children about pornography if they would like to reduce their children's need to seek outside sources to learn about sexuality and sexual activity. Engaging in values clarification about their own views on pornography may make discussing the topic easier.

If parents would prefer that their children are exposed to less sexually explicit content than their peers, they should consider initiating a holistic approach to mediation, using restrictive and nonrestrictive techniques. The media accessible to adolescents in friends' homes is impossible for parents to control when a dyad or group are in someone else's home, but their mediation behaviours can influence their children's levels of interest in sexual content, perception of peer influence, and, the variety of platforms in the media environment of boys.

More highly educated parents should be aware that their demographic tends to adopt more media platforms that channel adult content into the home and are less likely to mediate it. The literature (Atkin, 2001) and this study both observe this parental pattern. In this study, more highly educated parents had boys report lower levels of restrictive and nonrestrictive mediation, indirectly leading to greater exposure to sexually explicit content. The girls with college or university educated parents in this study reported less nonrestrictive mediation and a direct significant path was found between high rates of exposure to sexually explicit content for girls and higher rates of parent education.

Media industries have downloaded the responsibility for controlling content onto the consumer. Given levels of parental concern around parental content, and the vast amounts that Alberta households spend on subscribing to various media outlets, as consumers, parents should demand detailed and continuous guidance around controlling the content that comes into their homes.

Families using media together is not the norm for teens. Parents may want to rethink this pattern of media use un their homes to ensure that they are viewing what their teens are viewing and that parents can discuss the content with their adolescent children.

This research found a moderately high correlation between restrictive and nonrestrictive mediation, suggesting that although the two are strongly related, they are distinct parenting strategies. The high correlation of these two parenting dimensions indicated that parents were either doing both types of mediation or not doing either. For boys, restrictive parent mediation has a small negative effect on access to sexually

explicit media, peer influence, and interest in sexual content. For girls, restrictive parental mediation has a small negative effect on peer influence and interest in sexual content. Given that the indirect effects of restrictive parent mediation function the same way for boys and girls around peer influence and interest, and that these effects are modest but statistically significant, parents should be encouraged to know that restrictive mediation can play a role in limiting their children's access to sexually explicit content, even if their children are accessing it outside the home.

Nonrestrictive mediation does not have a significant effect on access to sexually explicit media for girls, but higher levels of nonrestrictive parenting techniques reduce levels of interest in sexual content for both genders, and have a negative effect overall on the variety of platforms in the media environment for boys. Given the finding that rural adolescents receive less nonrestrictive parenting than their urban counterparts and that they have higher rates of access to sexually explicit content, the effects of nonrestrictive mediation, particularly on boys, in reducing their levels of access, peer influence, and interest in such content, should be taken seriously by parents as a mediation tool. The reduction of the taboo around sexually explicit content through open discussion and values clarification may contribute to lowered levels of interest and peer influence.

The sample in this study is the first generation to come of age in the current media environment, and their parents are the first who have tried to parent in this context. Specific parenting behaviours need to be studied in depth with more sophisticated measures of parent behaviours, and parent reports as well as child reports of household dynamics around sexually explicit media would make a valuable contribution to the literature.

The sizable minority of adolescents who have not had exposure to sexually explicit content represent a rich resource for investigating effective parent mediation techniques and biopsychological variables in more depth to inform the development parent education strategies for reducing exposure to sexually explicit content. The media environment is changing quickly. Parents, health professionals, and media industries and regulators who base changes in practice on this study and are implementing changes based on media habits from adolescents reported in 2003.

Research is needed to find out which aspects of exposure to sexual content parents find most troubling. Are they afraid that their children will imitate behaviour in pornography and engage in precocious sexual activity? Are they aware of the modeling of unsafe sexual practices and the sexist portrayal of gender roles? Would they like this topic addressed in school sex education programs? Do they fear having to talk about it if their children are exposed to it, or are they afraid to talk about it in case they somehow interest their child in it by talking about it? The issue of children's access to sexually explicit media is emotionally loaded and an area parents may not feel equipped to discuss. It is an area that requires them to reflect on and communicate their own values about a difficult subject. One explanation for higher levels of restrictive mediation than nonrestrictive mediation may be that restrictive mediation is easier for parents, requiring less discussion and more authoritarian action.

Implications for Adolescents

The most pressing area for future research affecting adolescents directly is investigation into the relationship between exposure to sexually explicit media and behavioral outcomes, particularly for adolescent sexual health. Social factors that must

be taken into account in conducting such research include the recently documented declines in sexual health knowledge among Canadian youth, the incrementally but steadily declining age of first intercourse for Canadian teens, and a long history of insufficient government funding of sexual health services for teenagers in Alberta. Adolescent use of sexually explicit media needs to be taken seriously as an influence in the sexual socialization of adolescents. Research on effects is an absolute necessity and should be viewed as a health issue until research has shown conclusive evidence to the contrary.

The test of the causal model showed that peer influence was a strong predictor for access to sexually explicit media, which supports theoretical notions about the importance of proximal processes on developmental outcomes. This raises the question once again of whether the proximal process of exposure to pornographic images and video have behavioral outcomes in terms of sexual activity. This is a key area for future research in determining how adolescents are affected by sexually explicit media to appropriately regulate it.

This study found that rates of exposure to sexually explicit content are very high among adolescents in Alberta. Many of the norms in porn are sexually risky practices (anal sex, unprotected sex, group sex). Although nothing is known about how exposure sexually explicit media affects the sexual health of Alberta adolescents, it would be prudent for health policy makers to take seriously correlational evidence around sexualized media and sexual health outcomes, and proactively work to counteract any modeling or pressure that may be occurring from exposure to such content (as is the social norm in many European countries).

Adolescents in countries with social policies that support adolescent sexual health (comprehensive sexual health education in schools, government funded media campaigns, accessible sexual health services) have better sexual health outcomes despite similar rates of exposure to sexually explicit content. Rates and sources of exposure to such content for Canadian adolescents should be documented to justify meaningful parent education about regulating media in their homes, to evaluate current policies around media regulation, and to support adolescent reproductive health in a highly sexualized media environment.

Sex education teacher training is almost non-existent, particularly around skills and knowledge related to discussing/deconstructing/conducting values clarification around sexually explicit content. Ideally pre-service teacher training would enhance sex education teachers' comfort with this topic to provide a forum for adolescents to discuss how sexually explicit media affects their perceptions of sexual interaction, but very few pre-service teacher education courses exist for sex educators in Canadian universities. Systematic, meaningful and effective media literacy education in schools is needed at all grade levels to promote critical thinking about media messages. This skill set also requires teacher training, and few resources have been dedicated to this area.

The chronosystem dimensions of this bioecological model require further investigation. Bioecological factors such as interest are also accounted for somewhat by the chronosystem. The simplest form of chronosystem focuses around a normative life transition such as puberty, a change that serves as a direct impetus for development. Puberty elicits sexual interest and sexual interest is elicited during puberty through the media. This study shows that adolescents who state an interest in sexual content have

higher rates of exposure. Research is needed to understand this reciprocal relationship. Studies investigating several age cohorts concurrently would reveal how these relationships function at different ages and stages of socio and psychosexual development, and inform attempts to create a media environment in Alberta where adolescents experience healthy sexual development.

This research has demonstrated that child and environmental characteristics do have an effect on access to and use of sexually explicit media content by adolescents. Male and female adolescents are exposed to significant amounts of sexually explicit media content, but it appears that, to some degree, they do so in different contexts and possibly with different motivations. Parents, governments, and media industries have allowed the sexually explicit content environment to thrive in the near environment of children, largely ignoring the extent of their access and use and the possible outcomes. As the media environment continues to change and become an increasingly important aspect of children's near environment, it is imperative that research continues in this area.

Limitations of this study

Some statistically significant differences existed between the urban and rural subgroups in the sample (including the types of media present in homes and in the bedrooms of boys). Although it is tempting to draw conclusions about these differences, it is prudent to read those findings in terms of the type of media present in the home, given that the rural sample was small, and that there is plenty of variation in the social mores in rural Alberta communities. Interestingly, a greater number of rural schools were

willing to accommodate the researcher, although more urban students (from fewer schools) participated in the study.

Participants were given anonymous questionnaires, allowing them to relate their personal experiences without censure. The researchers acknowledge the potential for over or under reporting of key variables, but defend their use of the reported data as a valid as a starting point for gathering information in the context of the lack of previous research around adolescents and their exposure and access to sexually explicit media content.

The measures of variables in this study were somewhat crude, but the data analysis methods provided a way to examine relationships between the variables in an exploratory fashion.

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APPENDIX 'A'

Information Package for School District Superintendents

Sonya Thompson
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Letter of Invitation to Participate in the Adolescents and Restricted Media Study

_____
Superintendent,
_____ School
District
5555 55 St.,
Anytown, AB.
555 555

Dear _____,

I am seeking permission to approach principals in your school district to have grade eight teachers and their students participate in a study.

I am a graduate student at the University of Alberta, and am doing a research study for a Masters Thesis called the **Adolescents and Restricted Media Study**. It is a survey of grade eight students that asks them about their use of restricted media content.

Pending approval from you, principals in your district will be approached for permission to invite grade eight teachers to invite and allow their students to participate in this study by filling out a survey. It will require a total of about 2.5 hours of teacher time (1 hour of time for all communication involved and possibly up to 1.5 hours of class time with students for the survey).

I am willing to come to junior high schools in your district and administer the survey under teacher supervision with participating students, or, if the teacher prefers to administer it, detailed instructions will be sent on request.

Please read the following information, and let me know if you are willing to allow students in your district participate. The survey will be administered in numerous school districts in Alberta. A sample size of 300 grade eight students is a goal of the study. Your district's participation would make a significant contribution to this goal. Please find a letter with University ethics approval for this project attached.

Please accept my most sincere thanks for reading the attached materials and letting me know if you would like to get involved—I think we may all find the results interesting as well as beneficial. A summary of the findings will be distributed to all participants at the end of the study.

Yours truly,

Sonya Thompson, B.Ed., M.Sc. (Candidate)

Why 13 and 14 year olds?

This age group was chosen because each media rating system used in Alberta uses either age 13 or 14 as the first age increment above content recommended for children.

This age group experiences a shift in media use away from television to other types of media, as well as increased identity formation through media and social and uses of media.

Who will the findings benefit?

Findings from the proposed study will better equip parents and educators to mediate adolescent's use of restricted content.

Findings will have important implications and immediate practical application for policy makers and media producers and distributors in establishing practices to educate and protect young consumers in their homes and communities.

Adolescent interaction with restricted media does not always occur within the purview of parents. Findings about how adolescents self-regulate their use of restricted content in other settings may lead to improved dialogue with adolescents about experimentation with restricted content.

Why is this research important?

The Adolescents and Restricted Media Study is a first step in investigating adolescent use of and access to restricted media content in the home and community.

The research seeks to answer the question "How much restricted content are adolescents able to access at home and in the community through different media, and how do they gain access to it?"

Alberta adolescents have some of the highest rates of use of electronic entertainment media in North America (Statistics Canada, 2000, 2001, 1996), yet little is known about their access to content deemed inappropriate for them by government and industry ratings bodies.

The research will investigate:

- how adolescents perceive the ways in which restricted content is regulated to them

- how much and what types of restricted content adolescents are accessing, and the contexts in which it is accessed-- providing a "baseline" measure of rates of use of restricted content by adolescents with each medium in their homes and communities

The rationale for the study is the wellbeing of adolescents in their media environment.

- Children and youth are a dominant consumer force in the Canadian media marketplace (Robertson, 1998).

- With the proliferation of new technologies, contemporary adolescents live in a constantly changing and expanding media environment, an environment in which restricted media content is "pervasively and aggressively" marketed to them (Federal Trade Commission, 1999).

A review of decades of research on media effects reveals that the primary effects of media exposure on adolescents include increased violent and aggressive behavior, increased high-risk behaviors, such as alcohol and tobacco use, and accelerated onset of sexual activity (Villani, 2001).

With the exception of the Internet, no studies have investigated to extent to which adolescents are using restricted content on entertainment media in their home and community environments.

Upon approval from principals, grade eight *teachers* will be contacted and asked to follow this procedure:

1) If you choose to let your class participate in the project, please contact the researcher, Sonya Thompson, as soon as possible at

Room 302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)-425-3862
Fax: (780)492-4821
Email: sonyat@ualberta.ca

2) After giving consent to the researcher to survey your students, you will be provided with Information Sheets and Consent Forms for both students and parents.

3) You will be asked to read the student information sheet with the class to tell them about the project. You will ask them to take home Information Sheets and Consent Forms for their parents if they are interested. There will be a chance for them to win movie passes or a DVD player in two separate draws as a "thank-you" for participating.

   Students who return permission letters signed by their parents will be asked to sign a consent form to make sure they want to participate. If they do not want to participate, they do not need to explain their reasons.

4) When students have returned parental consent forms and have signed their own consent forms, you can tally the number of participants and decide on a convenient time for the survey to be conducted and let the researcher know if you would like her to administer the questionnaire, or if you would prefer to administer it yourself. It will require about 60 minutes, as there is an expected range in completion times from 40 to 60 minutes of class time, depending on the reading skill level of each student and which sections of the survey apply to each individual.

If you would like the researcher to be present to administer the questionnaire, you will be asked to provide an alternate activity for students who are not participating.

Alternately, if you would like to administer the questionnaire yourself, instructions will be faxed or emailed to you.

Additional Contact information:

If you want to contact the researcher or her supervisor at any time with questions, concerns, or complaints, or if you simply want more information about the study, contact:

Sonya Thompson (780-425-3862)
Dr. Berna Skrypnek (780-492-9277)
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Fax: (780)492-4821
Email: sonyat@ualberta.ca, berna.skrypnek@ualberta.ca

If you wish at any time to contact a person from the University of Alberta who is not involved with the study but may be contacted in case of any concerns, questions, or complaints about this study, please contact:

Dr. Nancy Gibson
Departmental Chair
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)492-3824
Fax: (780)492-4821

APPENDIX 'B'

Information Package for Principals

Sonya Thompson
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)-425-3862
Fax: (780)492-4821
Email: sonyat@ualberta.ca

Principal's Address Here

Letter of Invitation
to Participate in the
Adolescents and
Restricted Media Study

Dear Principal,

I have received permission from your Superintendent to approach you for permission to approach teachers at your school to have their **grade eight students** participate in a study.

I am a graduate student at the University of Alberta, and am doing a research study for a Masters Thesis called the **Adolescents and Restricted Media Study**. It is a survey of grade eight students that asks them about their use of restricted media content.

Pending approval from you, grade eight teachers will be encouraged to invite and allow their students to participate in this study by filling out a survey. It will require a total of about 1.5 hours of teacher time (1/2 hour of time for all communication involved and possibly up to one hour of class time with students for the survey).

I am willing to come to your school and administer the survey with participating students under teacher supervision, or, if the teacher wants to administer it, detailed instructions will be sent on request.

Please read the following information, and let me know if you are willing to allow students in your school to participate. The survey will be administered in numerous school districts in Alberta. A sample size of 300 grade eight students is a goal of the study. Your school's participation would make a significant contribution to this goal.

Students who participate will be entered in an instant draw for movie passes, and for a draw for a DVD player at the end of the study. Because the sample size is small, odds of winning are very high.

Please accept my most sincere thanks for reading the attached materials and letting me know if you would like to get involved—I think we may all find the results interesting as well as beneficial. A summary of the findings will be distributed to all participants at the end of the study.

You will find enclosed supporting information about the project, additional contact information, ethics approval, letters of support, and a description of how the research would proceed for teachers.

Yours truly,

Sonya Thompson, B. Ed., M. Sc. (Candidate)

Why 13 and 14 year olds?

This age group was chosen because each media rating system used in Alberta uses either age 13 or 14 as the first age increment above content recommended for children.

This age group experiences a shift in media use away from television to other types of media, as well as increased identity formation through media and social and uses of media.

Who will the findings benefit?

Findings from the proposed study will better equip parents and educators to mediate adolescent's use of restricted content.

Findings will have important implications and immediate practical application for policy makers and media producers and distributors in establishing practices to educate and protect young consumers in their homes and communities.

Adolescent interaction with restricted media does not always occur within the purview of parents. Findings about how adolescents self-regulate their use of restricted content in other settings may lead to improved dialogue with adolescents about experimentation with restricted content.

Why is this research important?

The Adolescents and Restricted Media Study is a first step in investigating adolescent use of and access to restricted media content in the home and community.

The research seeks to answer the question "How much restricted content are adolescents able to access at home and in the community through different media, and how do they gain access to it?"

Alberta adolescents have some of the highest rates of use of electronic entertainment media in North America (Statistics Canada, 2000, 2001, 1996), yet little is known about their access to content deemed inappropriate for them by government and industry ratings bodies.

The research will investigate:

- how adolescents perceive the ways in which restricted content is regulated to them

- how much and what types of restricted content adolescents are accessing, and the contexts in which it is accessed-- providing a "baseline" measure of rates of use of restricted content by adolescents with each medium in their homes and communities

The rationale for the study is the wellbeing of adolescents in their media environment.

- Children and youth are a dominant consumer force in the Canadian media marketplace (Robertson, 1998).

- With the proliferation of new technologies, contemporary adolescents live in a constantly changing and expanding media environment, an environment in which restricted media content is "pervasively and aggressively" marketed to them (Federal Trade Commission, 1999).

A review of decades of research on media effects reveals that the primary effects of media exposure on adolescents include increased violent and aggressive behavior, increased high-risk behaviors, such as alcohol and tobacco use, and accelerated onset of sexual activity (Villani, 2001).

Upon approval, teachers would be contacted and asked to follow this procedure:

1) If you choose to let your class participate in the project, please contact the researcher, Sonya Thompson, as soon as possible at

Room 302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)-425-3862
Fax: (780)492-4821
Email: sonyat@ualberta.ca

2) After giving consent to the researcher to survey your students, you will be provided with Information Sheets and Consent Forms for both students and parents.

3) You will be asked to read the student information sheet with the class to tell them about the project. You will ask them to take home Information Sheets and Consent Forms for their parents if they are interested. There will be a chance for them to win movie passes or a DVD player in two separate draws as a "thank-you" for participating.

Students who return permission letters signed by their parents will be asked to sign a consent form to make sure they want to participate. If they do not want to participate, they do not need to explain their reasons.

4) When students have returned parental consent forms and have signed their own consent forms, you can tally the number of participants and decide on a convenient time for the survey to be conducted and let the researcher know if you would like her to administer the questionnaire, or if you would prefer to administer it yourself. It will require about 60 minutes, as there is an expected range in completion times from 40 to 60 minutes of class time, depending on the reading skill level of each student and which sections of the survey apply to each individual.

If you would like the researcher to be physically present to administer the survey, you will be asked to provide an alternate activity for students who are not participating.

Alternately, if you would like to administer the survey yourself, instructions will be faxed or emailed to you.

Additional Contact information:

If you want to contact the researcher or her supervisor at any time with questions, concerns, or complaints, or if you simply want more information about the study, contact:

Sonya Thompson (780-425-3862)
Dr. Berna Skrypnek (780-492-9277)
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Fax: (780)492-4821
Email: sonyat@ualberta.ca,
berna.skrypnek@ualberta.ca

If you wish at any time to contact a person from the University of Alberta who is not involved with the study but may be contacted in case of any concerns, questions, or complaints about this study, please contact:

Dr. Nancy Gibson
Departmental Chair
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)492-3824
Fax: (780)492-4821

APPENDIX 'C'

Information Package for Teachers

Letter of Invitation to Participate in Adolescents and Restricted Media Study

Sonya Thompson
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)-425-3862
Fax: (780)492-4821
Email: sonyat@ualberta.ca

Dear _____,

I have received permission from your school district superintendent and principal to approach you about participating in a study.

I am a graduate student at the University of Alberta, and am doing a research study for a Masters Thesis called the **Adolescents and Restricted Media Study**. It is a survey of grade eight students that asks them about their use of restricted media content.

You are being asked to participate by inviting and allowing your students to participate in this study by filling out a survey. It will require a total of about 2.5 hours of your time (1 hour of your time for all communication involved and possibly up to 1.5 hours of class time with your students for the survey).

I am willing to come to your school and administer the survey with your students, or, if you prefer to administer it, detailed instructions will be sent on request. Please read the following information, and let me know if you are interested in participating. The survey will be administered in numerous school districts in Alberta. A sample size of 300 grade eight students is a goal of the study. Your participation would make a significant contribution to this goal. Please find a letter with University ethics approval for this project attached.

Please accept my most sincere thanks for reading the attached materials and letting me know if you would like to get involved—I think we may all find the results interesting as well as beneficial. A summary of the findings will be distributed to all participants at the end of the study.

Yours truly,

Sonya Thompson, B.Ed., M.Sc. (Candidate)

Why 13 and 14 year olds?

This age group was chosen because each media rating system used in Alberta uses either age 13 or 14 as the first age increment above content recommended for children.

This age group experiences a shift in media use away from television to other types of media, as well as increased identity formation through media and social and uses of media.

Who will the findings benefit?

Findings from the proposed study will better equip parents and educators to mediate adolescent's use of restricted content.

Findings will have important implications and immediate practical application for policy makers and media producers and distributors in establishing practices to educate and protect young consumers in their homes and communities.

Adolescent interaction with restricted media does not always occur within the purview of parents. Findings about how adolescents self-regulate their use of restricted content in other settings may lead to improved dialogue with adolescents about experimentation with restricted content.

Why is this research important?

The Adolescents and Restricted Media Study is a first step in investigating adolescent use of and access to restricted media content in the home and community.

The research seeks to answer the question "How much restricted content are adolescents able to access at home and in the community through different media, and how do they gain access to it?"

Alberta adolescents have some of the highest rates of use of electronic entertainment media in North America (Statistics Canada, 2000, 2001, 1996), yet little is known about their access to content deemed inappropriate for them by government and industry ratings bodies.

The research will investigate:

- how adolescents perceive the ways in which restricted content is regulated to them

- how much and what types of restricted content adolescents are accessing, and the contexts in which it is accessed-- providing a "baseline" measure of rates of use of restricted content by adolescents with each medium in their homes and communities

The rationale for the study is the wellbeing of adolescents in their media environment.

- Children and youth are a dominant consumer force in the Canadian media marketplace (Robertson, 1998).

- With the proliferation of new technologies, contemporary adolescents live in a constantly changing and expanding media environment, an environment in which restricted media content is "pervasively and aggressively" marketed to them (Federal Trade Commission, 1999).

A review of decades of research on media effects reveals that the primary effects of media exposure on adolescents include increased violent and aggressive behavior, increased high-risk behaviors, such as alcohol and tobacco use, and accelerated onset of sexual activity (Villani, 2001).

How the survey will proceed:

1) If you choose to let your class participate in the project, please contact the researcher, Sonya Thompson, as soon as possible at

Room 302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)-425-3862
Fax: (780)492-4821
Email: sonyat@ualberta.ca

2) After giving consent to the researcher to survey your students, you will be provided with Information Sheets and Consent Forms for both students and parents.

3) You will be asked to read the student information sheet with the class to tell them about the project. You will ask them to take home Information Sheets and Consent Forms for their parents if they are interested. There will be a chance for them to win movie passes or a DVD player in two separate draws as a "thank-you" for participating.

   Students who return permission letters signed by their parents will be asked to sign a consent form to make sure they want to participate. If they do not want to participate, they do not need to explain their reasons.

4) When students have returned parental consent forms and have signed their own consent forms, you can tally the number of participants and decide on a convenient time for the survey to be conducted and let the researcher know if you would like her to administer the questionnaire, or if you would prefer to administer it yourself. It will require about 60 minutes, as there is an expected range in completion times from 40 to 60 minutes of class time, depending on the reading skill level of each student and which sections of the survey apply to each individual.

If you would like the researcher to be physically present to administer the survey, you will be asked to provide an alternate activity for students who are not participating.

Alternately, if you would like to administer the survey yourself, instructions will be faxed or emailed to you.

Additional Contact information:

If you want to contact the researcher or her supervisor at any time with questions, concerns, or complaints, or if you simply want more information about the study, contact:

Sonya Thompson (780-425-3862)
Dr. Berna Skrypnek (780-492-9277)
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Fax: (780)492-4821
Email: sonyat@ualberta.ca,
berna.skrypnek@ualberta.ca

If you wish at any time to contact a person from the University of Alberta who is not involved with the study but may be contacted in case of any concerns, questions, or complaints about this study, please contact:

Dr. Nancy Gibson
Departmental Chair
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)492-3824
Fax: (780)492-4821

Faxable Reply Form
Adolescents and Restricted Media Study

Fax to:
Sonya Thompson or Berna Skrypnek
C/o Department of Human Ecology, University of Alberta

Fax #: (780)-492-4821
Phone #: (780)-492-9277

From:

Teacher's name: _____

School: _____

☐ I am interested in inviting my class to participate in the Adolescents and Restricted Media Study.

☐ I would like more information.

☐ I would like the instructions for administering the survey faxed/emailed (please circle) to me.

Please contact me:

☐ By phone at: _____ _____

☐ By email at: _____

☐ By fax at: _____

Additional comments:

APPENDIX 'D'

Teacher Instructions for Administering the Adolescents and Restricted Media Questionnaire

Teacher Instructions for Administering the Adolescents and Restricted Media Questionnaire

(To be sent to teachers upon request separate from the information package if they prefer to administer the questionnaire instead of having the researcher do it)

1. Contact the researcher after you have tallied the number of participants to let her know when you would like to conduct the survey. She will send you a package containing a return courier envelope and four manila envelopes.

   One of the three marked manila envelopes contains the questionnaires and an envelope to hand out with each questionnaire. Please count the questionnaires and envelopes when you receive them from the researcher to ensure that you have enough for all participating students. One empty envelope is for completed Parent and Student consent forms. The second empty envelope is to return the entry forms for the draw for the DVD player.

2. You will need a shoebox or a bucket to use as a draw box at the end of the survey.

3. Ensure that each student who participates hands in both the Parental Consent Form and the Student Consent Form. They cannot participate unless both forms are handed in to you. Place them in the indicated envelope and seal it. You will be asked to return these to the researcher, who will store them in a locked cabinet at the University of Alberta and destroy them after a period of one year. No one other than the researcher and her supervisor will see them.

4. Seat the participating students in a room free of distraction, and tell them they have up to 60 minutes to finish the survey so they can take their time and answer each question. Distribute the questionnaires and envelopes and ask the students not to open the questionnaire. Please read the first page with them and ask if there are any questions. Answer their questions, and remind them they are asked not to talk to each other while the survey is taking place. Have them start filling out the survey.

5. As the students finish, they will fill out two draw entry forms on the back page of the questionnaire. They will place their completed questionnaires in the envelope they have been given and seal it. They will hand you the sealed envelope. Place the entry form for movie passes in your draw container. Place the DVD draw entry forms in the indicated envelope and seal it. Remind the students that the DVD draw will take place at the University after surveys from across the province have been completed, and that they will be contacted through the school if they win.

6. Have a student volunteer draw a name for movie passes and award the prize.

7. Place the envelopes with the surveys, consent forms, and DVD draw entry forms, into the box or bubble pack they arrived in. Shred the movie pass draw forms. Contact the researcher and she will have a courier pick up the envelope from your school office.

8. When data collection is complete, the researcher will send you a summary of the results of the entire sample. Your community and school will not be identified. There will be enough copies of this summary for you to send one home with each student who participated in the study. If you would like to read more detailed findings, you can contact the researcher directly.

APPENDIX 'E'

Information Sheet for Parents

Information Sheet for Parents
Adolescents and Restricted Media Study

Your child is invited to participate in a research study called the Adolescents and Restricted Media Study. The research is being done by a Masters Degree candidate from the University of Alberta.

Reasons for the study:
Children and youth are a huge market for entertainment media, and Albertans have some of the highest rates of use of electronic media in North America. Adolescents live in a media environment where adult oriented content is constantly marketed to them, yet we know very little about how much restricted content they access at home or in the community.

This research study hopes to find out how grade eight students use media such as video, DVD, digital TV, pay TV, satellite TV, video games, the Internet, and movie theatres, to see movies, shows, games and websites that are intended for adults.

Why 13 and 14 year olds?
This age group was chosen because each media rating system used in Alberta uses either age 13 or 14 as the first age increment above content recommended for children. This age group experiences a shift in media use away from television to other types of media, as well as increased identity formation through media and social and uses of media.

Participating students will be asked to fill out a questionnaire that asks about their media intended for adults. The questionnaire will take less than one hour. Students from different parts of the province will be filling out the questionnaire.

How will it happen?
Students who bring permission letters signed by their parents will be asked to sign a consent form to make sure they want to participate. If they do not want to participate, they do not need to say why. Their teacher will have an alternative activity for them to do.

Students who have parental permission and have signed their own consent form will be asked to complete a questionnaire. The questionnaire asks about the ways they use media to see movies, shows, games and websites intended for adults. They will be asked about what they have seen and how they got access to it.

Where will it happen?
The questionnaire will be done in class, as soon as all students who wish to participate have returned their consent forms. Most of the questions can be answered by checking a box with the answer, but some of the questions ask students to answer with their own words. There are no right or wrong answers.

How will it benefit my child or our family?
This study may not have any direct benefits for your child. After the project is done, a summary of the results from the survey from all over the province will be sent to the teacher with enough copies to send home with students who did the questionnaire. Some parents may want to discuss the group results with their kids, and some sources of information for parents about kids and media will be attached to the survey results. No individual results will be released—the summary will have averages and percentages based on the entire provincial sample.

Are there any risks involved?
It is not expected that being in this study will harm your child. Some students may have unpleasant memories of shows, movies, games or websites they have seen in the past. They will be asked to talk to you or their school guidance counselor, or call the Kid's Help Phone (a free call) if something like this is bothering them.

If you need more information about age ratings for different types of media, you can go to www.cd.gov.ab.ca/movies or make a free call to 310-000 and ask for Alberta Film Classification Services.

Who will see what my child wrote?
Students will not write their names on the questionnaire. No one will connect the questionnaire with the student, his or her class, or the school. The questionnaires will be read only by the researcher and her supervisor for data entry at the University of Alberta.

Withdrawal from the Study:
Even if you have agreed to let your child participate in the study, they are free to decide they don't want to do it. Even if they start completing the questionnaire in class, they can stop at any time. If they start but don't finish, the researcher will not be able to use their questionnaire and the incomplete questionnaire will be destroyed.

Use of the Information from the Questionnaire:
This study is being done for a Master's thesis. The researcher is a student at the University of Alberta. The results from all of the questionnaires will be made into a report. Teachers whose students participated will receive summarized copies of the report to send home to parents of students who participated. If you would like more information, or would like the report even if your child did not participate, you can contact the researcher and it will be mailed to you.

The report will be given to people who make regulations about the types of movies children should be allowed into at theatres, and the types of games and movies they are allowed to

buy or rent at given ages. It will be shared with parents to help them educate their kids about using media intended for adults. The results might also be presented at a conference or published in an academic journal.

The researcher may also write about the results in an academic journal, present the information at a conference, and use the results for future studies. Other researchers may use the information in the future.

Draw for a DVD Player

On the last page of the questionnaire, students will find a detachable contest entry form. They are asked to write their first name and last initial on this form if they choose to do so. The contest entry forms will be collected separately from the questionnaires. Immediately after the questionnaires are completed in class, a draw for a pair of movie passes will take place. When all participating schools have returned completed questionnaires, a draw for a DVD player will take place at the University of Alberta. The researcher's supervisor will make the draw. The winning student will be contacted through his or her school.

The goal for participants in the study is 300 students, so the chances of winning the movie passes are 1 per class and the odds of winning the DVD player are around 1 in 300.

Additional Contact information:

If you want to contact the researcher or her supervisor at any time with questions, concerns, or complaints, or if you simply want more information about the study, contact:

Sonya Thompson (780-425-3862)
Dr. Berna Skrypnek (780-492-9277)
Department of Human Ecology
302 Human Ecology Building, University of Alberta
Edmonton, Alberta, T6G 2N1
Fax: (780)492-4821
Email: sonyat@ualberta.ca,
berna.skrypnek@ualberta.ca

If you wish at any time to contact a person from the University of Alberta who is not involved with the study but may be contacted in case of any concerns, questions, or complaints about this study, please contact:

Dr. Nancy Gibson
Departmental Chair, Department of Human Ecology
302 Human Ecology Building,
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)492-3824
Fax: (780)492-4821

APPENDIX 'F'

Consent Form for Parents

CONSENT FORM FOR PARENTS

Name of project: Adolescents and Restricted Media Study
Investigators: Sonya Thompson and Dr. Berna Skrypnek,
Dept. of Human Ecology
302 Human Ecology Building, University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)-492-9277 Fax: (780)492-4821
Email: sonyat@ualberta.ca, berna.skrypnek@ualberta.ca

Please circle your answers.

I understand that my child has been asked to be in a research study.	Yes	No
I have received and read a copy of the attached information sheet.	Yes	No
I understand the benefits and risks involved for my child in taking part in this research study.	Yes	No
I understand that I can contact the researchers at any time if I have questions about the study.	Yes	No
I understand my child can quit taking part in this study at any time, and that they do not have to say why.	Yes	No
I understand that the survey results are confidential and answers my child gives cannot be connected to them.	Yes	No
I understand that the results are going to be used for a masters degree thesis. The results may also be presented at a conference and may be published in a research journal.	Yes	No
I understand that Sonya Thompson or another researcher may use these results in a future study about adolescents and the media.	Yes	No
I agree to allow my child to participate in this study.	Yes	No

Child's name: _____

Parent's name (print)_____

Parent's signature: _____

APPENDIX 'G'

Information Sheet for Students

INFORMATION SHEET FOR STUDENTS

Adolescents and Restricted Media Study

You are being invited to participate in a research study called Adolescents and Restricted Media Study. The research is being done by a graduate student from the University of Alberta.

What is it? This study is a survey that asks students in grade eight how they use media to see movies, shows, games and websites **that are intended for adults**. This includes video, DVD, digital TV, pay TV, satellite TV, video games, the Internet, and movie theatres.

To participate: If your parent gives you permission and you want to participate in the study, you will be asked to fill out a questionnaire about the ways you access movies, shows, games and websites intended for adults. You will be asked whether you have accessed media intended for adults, and how you got access to it.

Do I have to do it? No, you can decide not to participate at any time. You do not even have to take the parent information sheet home if you are not interested. You will not have to say why if you don't want to participate. Your teacher will give you something else to do.

When and where will it happen? The questionnaire will be done in class after everyone who wants to participate brings back BOTH consent forms signed. Most of the questions can be answered by checking a box with the answer, but some of the questions ask you to answer with your own words. There are no right or wrong answers. The questionnaire will take you between 40 and 60 minutes to do.

Who will know what I wrote? No one will know what you answered. You will **not** put your name on the questionnaire. **Nothing on the questionnaire will connect it with you, your class, or your school.** You will put your completed questionnaire into an envelope and seal the envelope. The questionnaires will be read only by the researcher and her supervisor, and only after the researcher has left the school and returned to the University of Alberta.

Is there anything in it for me? This study may not have any direct benefits for you. You might be interested in the results-- after the project is done, a report of the results from the survey from all over the province will be sent to your teacher with enough copies to send with you if you or your parents are interested in it. **Nothing about individual students like you, or your school, will be included in the report.** The report will include overall summaries using averages and percentages for the whole province.

Will anything bad happen if I participate? Being in this study should not harm you. It is possible that you may have unpleasant memories of shows, movies, games or websites that you have seen in the past. You will be asked to talk to your parents or school guidance

counselor if something like this is bothering you. You can also call the Kid's Help Phone at 1-800-668-6868- it is a free call you can make any time of the day or night to talk anonymously with a counselor.

Can I quit at any time? Yes, even if your parents have agreed to let you participate in the study, you are free to decide you don't want to do it, even if you started doing it. If you start but don't finish, the researcher will not be able to use your questionnaire.

How will the information be used? This study is being done by a graduate student at the University of Alberta who is studying how adolescents use media. The results from all of the questionnaires will be made into a report. When the study is done, your teacher will get a copy of the report for you to take home to read and share with your parents. The researcher may also write about the results in an academic journal, present the information at a conference, and use the results for future studies. Other researchers may use the information in the future. The findings will help design better media education programs.

Each student who participates can enter a draw right in the classroom for a **pair of movie passes** that will happen after the whole class has finished doing the survey. You can also enter a **draw to win a DVD player** that will happen when all of the questionnaires in different parts of the province have been completed.

If you win, you will be contacted through the school (you will **not** be asked for your phone number).

What if I want to talk to someone about the study?

If you want to contact the researchers at any time with questions, concerns, or complaints, or you simply want more information about the study, contact:

Sonya Thompson or Dr. Berna Skrypnek, Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)-492-9277
Fax: (780)492-4821
Email: sonyat@ualberta.ca, berna.skrypnek@ualberta.ca

If you wish at any time to contact a person from the University of Alberta who is **not involved** with the study but may be contacted in case of any concerns, questions, or complaints about this study, please contact:

Dr. Nancy Gibson, Departmental Chair
Department of Human Ecology
302 Human Ecology Building
University of Alberta
Edmonton, Alberta, T6G 2N1
Phone: (780)492-3824
Fax: (780)492-4821

APPENDIX 'H'

Consent Form for Students

CONSENT FORM FOR STUDENTS

Name of project: Adolescents and Restricted Media Study

Investigators:
Sonya Thompson and Dr. Berna Skrypnek
Department of Human Ecology, 302 Human Ecology Building
University of Alberta, Edmonton, Alberta, T6G 2N1
Phone: (780)-492-9277 Fax: (780)492-4821
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Please circle your answers.

I understand that I have been asked to be in a research study.	Yes	No
I have received and read a copy of the information sheet.	Yes	No
I understand the benefits and risks involved for me in taking part in this research study.	Yes	No
I understand that I can contact the researchers at any time if I have questions about the study.	Yes	No
I understand I can quit taking part in this study at any time, and that I do not have to say why.	Yes	No
I understand that the survey results are confidential and answers I give cannot be connected to them.	Yes	No
I understand that the results are going to be used for a masters degree thesis. The results may also be presented at a conference and may be published in a research journal.	Yes	No
I understand that Sonya Thompson or another researcher may use these results in a future study about adolescents and the media.	Yes	No
I agree to participate in this study.	Yes	No

Today's date: _____

My name (print):_____

My signature: _____

Teacher/researcher (witness) signature: _____

APPENDIX 'I'

Questionnaire for Adolescents and Restricted Media Study

Adolescents and Restricted Media Survey

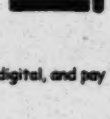
Do **NOT** open the survey or begin until you are instructed to do so.

In this survey, the word **media** means the things we watch, play, and download, like:

- movies
- TV shows
- websites
- and video games

Media also includes the technology we use to watch, play, and download, like:

- VCRs and DVD players



- Satellite, digital, and pay TV
- Computers and game consoles

- Movie theatres

This survey is about some of the ways you use media.

- It is not a test.
- There are no right or wrong answers.
- You do not need to make complete sentences when you write on this survey.
- Your answers are private -- no one will know you wrote them. Your teacher will not read your answers.
- You have one hour to complete this survey.
- Thanks for participating!

Media in the Home

The first questions ask about media in your home and other homes you go to.

If you live in more than one home, answer for all of the houses you live in.

1. The media in my house include:
   (Check all that apply)

   - ❑ TV how many? ____
   - ❑ cable TV
   - ❑ VCR how many?____
   - ❑ DVD player how many?____
   - ❑ Digital TV
   - ❑ Satellite TV
   - ❑ Pay per view TV
   - ❑ Internet
   - ❑ Computer/video game console how many?____

2. The media in my bedroom include:
   (Check all that apply)

   - ❑ TV (no cable)
   - ❑ Cable TV
   - ❑ Digital TV
   - ❑ Satellite TV
   - ❑ Pay per view TV
   - ❑ VCR
   - ❑ DVD player
   - ❑ Internet connection
   - ❑ Computer/video game equipment

3. My parents use:
   (Check all that apply)

   - ❑ V-chip on the TV so I can't watch certain shows
   - ❑ Blocking software on the computer to block certain websites
   - ❑ No parental controls on TV or computer
   - ❑ I don't know if they use anything like that

4. Media I have used in other peoples houses includes: *(Check all that apply)*

   - ❑ DVD or VCR
   - ❑ satellite television
   - ❑ digital television
   - ❑ pay TV
   - ❑ Internet
   - ❑ video or computer games
   - ❑ I haven't used any of these in someone else's house

Ratings

The next questions ask about what you know about age ratings on movies and computer games.

Write your answers in the spaces provided.

5. What is the recommended age for watching a movie rated R?
   _____
   _____

6. What does it mean when a movie is rated 18A?
   _____
   _____

7. What is the recommended age for playing a video or computer game rated M?
   _____
   _____

8. What is the recommended age for playing a video or computer game rated A?
   _____
   _____

9. How can you tell if a TV show is for people over 18?
   _____
   _____

10. How can you tell if a website is for people over 18?
    _____
    _____

How My Media is Monitored

The next questions ask about the ways adults let you use certain types of media .

Watching Movies

11. I think I need rules about what kind of movies I can watch: ❑ Yes ❑ No

12. People younger than me need rules about what kind of movies they can watch: ❑ Yes ❑ No

13. My parents have talked to me about the types of movies I watch:

    ❑ never
    ❑ rarely
    ❑ a few times
    ❑ many times
    ❑ each time I see a movie

14. The type of movies that my parents have told me they are most concerned about me watching is:

    ❑ movies with violent content
    ❑ movies with sexual content
    ❑ movies with bad language
    ❑ Other: *(explain)*_____
    _____
    ❑ They haven't told me what they are most concerned about

15. Adults do a good job explaining why there are certain movies they don't want me to watch.

    ❑ Yes ❑ No

Movie Theatres

These questions are about the types of movies you are able to see in theatres.

16. My parents have rules about what kind of movies I am allowed to see at the theatre:

    ❑ Yes ❑ No

    If yes, what are the rules?

    _____
    _____

17. When I go to the movie theatre, my parents know the age rating of the movie I am going to see:

    ❑ never
    ❑ sometimes
    ❑ most of the time
    ❑ every time

18. I have tried to get into an 18A or R rated movie without an adult:

    ❑ never
    ❑ yes- I tried but the staff stopped me
    ❑ yes- I gottan into at least one
    ❑ yes- I tried and got in but they made me leave

    Some of the movies I wanted to get into are: *(Write the names of the movies here)*

    _____
    _____
    _____

19. At the movie theatre I go to most, it is easy to get into 18A and R movies:

    ❑ Yes ❑ No ❑ I don't know

20. Movie theatre staff try very hard to keep kids my age out of movies rated R and 18A:

    ❑ Yes ❑ No

21. The person most responsible for making sure I watch only movies I am allowed to watch in the theatre is:

    ❑me
    ❑a parent
    ❑the person who sells me the ticket

Video and DVD

The next questions are about the types of video or DVD you are able to see in your

home. *If you don't use video or DVD at home, go to #33.*

22. My parents have rules about what kind of movies I am allowed to rent or watch at home:

    ❑ No *(go to # 27)* ❑ Yes

    If yes, what are the rules?

    _____
    _____
    _____

23. Do you ever break theses rules at home?

    ❑ never *(go to #25)*
    ❑ rarely
    ❑ a few times
    ❑ a lot
    ❑ always

24. When a parent catches you breaking the rules at home, what happens? *(Check all that apply)*

    ❑ they never catch me
    ❑ nothing happens
    ❑ they get mad but nothing happens
    ❑ I lose TV, VCR, and or DVD privileges
    ❑ I get punished
    ❑ we discuss it

25. Which parent enforces the rules most?

    ❑ Mom/Stepmom
    ❑ Dad/Stepdad

26. In my home the rules about TV, DVD, and VCR use are enforced:

    ❑ never
    ❑ rarely
    ❑ sometimes
    ❑ most of the time
    ❑ each time I see a movie

27. When I rent movies, my parents check the age rating:

    ❑never
    ❑rarely
    ❑sometimes
    ❑many times
    ❑each time I see a movie
    ❑I don't rent my own movies *(go to #31)*

28. I have tried to rent a movie rated 18A or R:

    ❑ no *(go to #30)* ❑ yes

28a. Did the staff in the store let you rent it?

    ❑ Yes ❑ No

29. I have rented an 18A or R movie without someone over 18 with me:

    ❑ never
    ❑ once
    ❑ a few times
    ❑ many times

30. My parents have talked to video store staff about movies they don't want the store to rent to me:

    ❑ Yes ❑ No ❑ I don't know

31. The person most responsible for making sure I watch only movies I am allowed to watch on video and DVD is:

    ❑ me
    ❑ a parent
    ❑ the person who rents me the movie

32. The person who knows the most about how to use the DVD player in my house is:

    ❑ Mom/ Stepmom
    ❑ Dad/ Stepdad
    ❑ Brother
    ❑ Sister
    ❑ Me
    ❑ We all know about the same
    ❑ We have a VCR but no DVD player

Specialty Television

The next questions are about the ways you are allowed to use satellite television, digital television, or pay TV in your house.

If you don't have satellite television, digital television, or pay TV in your house, go to the next section, Video and Computer Games, starting at #38.

33. My parents have rules about how I am allowed to use digital, satellite, or pay TV:

❑ Yes ❑ No

If yes, what are the rules?

_____
_____
_____
_____

34. My parents talk to me about the types of *adult-only* shows that are on specialty TV:

❑ never
❑ rarely
❑ sometimes
❑ a lot

35. The type of adults-only shows my parents have told me they are most concerned about me watching are: *(check all that apply)*

❑ shows with violent/gory content
❑ shows with hateful content
❑ shows with sexual content
❑ other type of show *(explain)*

_____

❑ They haven't told me what they are most concerned about

36. Adults do a good job of keeping me away from *adult-only* stuff on digital, satellite, and pay TV:

❑ Yes ❑ No

37. The person who knows the most about how to use the specialty TV services in my house is:

❑ Mom/ Stepmom
❑ Dad/ Stepdad
❑ Brother
❑ Sister
❑ Me
❑ We all know about the same

Video and Computer Games

The next questions are about the ways your use of video and computer games is monitored at home.
If you don't play video/computer games at home, go to the next section, Internet, starting at #46.

38. My parents have rules about the types of video and computer games I am allowed to play:

❑ Yes ❑ No

If yes, what are the rules?

_____
_____
_____
_____

39. My parents talk to me about the types of games I play:

❑ never
❑ rarely
❑ sometimes
❑ most of the time
❑ always

40. The types of game that concerns my parents most are: *(check all that apply)*

❑ games with violence
❑ games with sex or nudity
❑ other: *(explain)*

_____

❑ They haven't told me what they are most concerned about

41. My parents check the age ratings of the games I play:

❑ never
❑ rarely
❑ sometimes
❑ most of the time
❑ always

42. My parents do a good job of explaining what kinds of games I should or should not play:

❑ Yes ❑ No

43. Staff in stores where I buy or rent video/computer games do a good job trying to stop me from renting/buying games rated M or A: ❑ Yes ❑ No

44. The person most responsible for making sure I play games I am allowed to play is:

❑ me
❑ a parent
❑ the person who sells or rent games

45. The person who knows the most about playing video/computer games in my house is:

❑ Mom/ Stepmom
❑ Dad/ Stepdad
❑ Brother
❑ Sister.
❑ Me
❑ We all know about the same

Internet

The next questions are about the ways your Internet use at home is monitored.
If you do not use the Internet at home, go to next section, Using Media, starting at #54.

46. It is important for adults to keep kids my age away from *adult-only* stuff on the Internet:

❑ Yes ❑ No

47. Adults do a good job of keeping me away from *adult-only* stuff on the Internet:

❑ Yes ❑ No

48. My parents have talked to me about the types of websites I visit:

❑ never
❑ rarely
❑ sometimes
❑ a lot

49. The types of websites my parents have told me they are most concerned about me using are: *(check all that apply)*

❑ chatrooms
❑ websites with violent/gory content
❑ websites with hateful content
❑ websites with sexual content
(answers continued in next column)

❑ other type of website *(explain)*

_____

❑ They haven't told me what they are most concerned about

50. My parents have talked to me about pornography on the Internet:

❑ Yes ❑ No

51. Someone checks where I have been on the Internet:

❑ Yes ❑ No ❑ I don't know

If yes, who?

❑ Mom/ Stepmom
❑ Dad/ Stepdad
❑ Brother
❑ Sister
❑ Other: *(write who)*

_____

52. The person who knows the most about the Internet in my house is:

❑ Mom/ Stepmom
❑ Dad/ Stepdad
❑ Brother
❑ Sister
❑ Me
❑ We all know about the same

Using Media

This section asks questions about how you and your friends use different types of media.

Movies

The next questions are about how you and your friends find, avoid, and deal with certain types of movies.

54. Before I watch a movie, I know if it will be scary or have coarse language, sex or violence in it: *(check all that apply)*

- ❑ I don't usually know what will be in it before I watch it
- ❑ from the rating
- ❑ from the warnings
- ❑ because someone has told me about it
- ❑ from the previews
- ❑ from the ads
- ❑ other (explain):

_____
_____

55. I would be interested in watching a movie with these warnings on it: *(check all that apply)*

- ❑ extreme violence
- ❑ sexual content
- ❑ gory violence
- ❑ frightening scenes
- ❑ crude content
- ❑ coarse language (swearing)
- ❑ mature themes
- ❑ none of them interest me

56. I would avoid a movie with these warnings on it: *(check all that apply)*

- ❑ extreme violence
- ❑ sexual content
- ❑ gory violence
- ❑ frightening scenes
- ❑ crude content
- ❑ coarse language(swearing)
- ❑ mature themes
- ❑ I would probably watch any of them

57. I have felt pear pressure to watch a movie I didn't want to watch:

❑ Yes ❑ No (go to #58)

If yes, what type of movie was it?
(Check all that apply)

- ❑ violent
- ❑ frightening
- ❑ sexual
- ❑ something I know my parents wouldn't want me to watch
- ❑ other: *(explain)*_____

57a. How did you handle the situation?

- ❑ By making myself watch it
- ❑ By telling them I didn't want to watch it
- ❑ By making up an excuse so I didn't have to watch it
- ❑ other: *(explain)*

_____

Scary Movies

These questions ask about how you watch scary movies—movies that are frightening and suspenseful, but not necessarily violent. (The next section is about violent movies).

58. The last time I had a nightmare from watching a scary or suspenseful movie was:

- ❑ in the past week
- ❑ in the past month
- ❑ in the past year
- ❑ when I was age____
- ❑ I've never had a nightmare from watching a movie

59. In comparison to my friends:

- ❑ I don't get scared by movies as easily as my friends do
- ❑ I get scared by movies more easily than my friends
- ❑ I get scared by movies about the same as my friends do

60. I have been too embarrassed to tell my friends I thought a movie was too scary for me to watch:

❑ Yes ❑ No

61. How often do you watch scary movies with your friends?

- ❑ never
- ❑ rarely
- ❑ sometimes
- ❑ a lot

62. When I watched a really scary movie by myself, I got through watching it: *(check all that apply)*

- ❑ by not watching during the scary parts
- ❑ by making myself watch it
- ❑ by reminding myself it is not real
- ❑ I don't watch scary movies alone
- ❑ I don't get scared easily by movies
- ❑ other ways I got through watching a really scary movie alone:

_____
_____

63. When I have watched a very scary movie with friends, I got through it by:

- ❑ by not watching during the scary parts
- ❑ by making myself watch it
- ❑ by reminding myself it is not real
- ❑ I made up an excuse to stop watching
- ❑ other: *(explain)*

_____
_____

- ❑ I don't need to do anything special to get through a scary movie

64. Are there any movies you wished you hadn't watched because they were so scary?

❑ Yes ❑ No
Which ones?
(Write the names of the movies here)
_____
_____

Violent Movies

The next questions are about violent movies—movies showing fighting, torture, killing, and people using force against other people.

65. The last time I had a nightmare from watching a violent movie was:

- ❑ in the past week
- ❑ in the past month
- ❑ in the past year
- ❑ when I was age____
- ❑ I've never had a nightmare from watching a movie

66. In comparison to my friends:

- ❑ I don't get affected by violence in movies as easily as my friends do
- ❑ I get affected by violence in movies more easily than my friends do
- ❑ I get affected by violence in about the same as my friends do

67. I have been too embarrassed to tell my friends I thought a movie was too violent for me to watch:

❑ Yes ❑ No

68. How often do you watch violent movies with your friends?

- ❑ never
- ❑ rarely
- ❑ sometimes
- ❑ a lot

69. Are there any movies you wished you hadn't watched because they were so violent?

❑ Yes ❑ No

Which ones?
(Write the names of the movies here)
_____
_____

Going to Movie Theatres

The next questions ask about the types of movies you see in the theatre.

70. I go to the movie theatre: .

- ❑ at least once a week
- ❑ at least twice a month
- ❑ around once a month
- ❑ once every 3 months
- ❑ less than once every 3 months

71. When choosing a movie at the theatre, I check the age rating before I buy my ticket:

- ❑ never *(go to # 72)*
- ❑ rarely
- ❑ sometimes
- ❑ most of the time
- ❑ every time I go to a movie

71a. I check the rating: *(check all that apply)*

- ❑ so parents will let me see the movie
- ❑ to make sure I won't have a problem buying the ticket because I am too young
- ❑ to make sure there will be some violence, sex, or scary stuff in it
- ❑ to make sure there is *little or no* violence, sex, or scary stuff in it
- ❑ other reason (explain):

_____

_____

72. The scariest movie I have ever seen in a movie theatre is:

_____

(Write the name of the movie here)

- ❑ I have never seen a scary movie in a theatre (go to #73)

72a. The person who bought my ticket was:

- ❑ me *(go to #73)*
- ❑ my parent
- ❑ A friend's parent
- ❑ An older friend
- ❑ older brother or sister
- ❑ other:_____

72b. They stayed and watched the movie with me:

- ❑ yes ❑ no

73. The most violent movie I have ever seen in a movie theatre is:

_____

(Write the name of the movie here)

- ❑ I have never seen a violent movie in the theatre *(go to #74)*

83a. The person who bought my ticket was:

- ❑ me *(go to #74)*
- ❑ my parent
- ❑ A friend's parent
- ❑ An older friend
- ❑ older brother or sister
- ❑ other:_____

73b. They stayed and watched the movie with me:

- ❑ yes ❑ no

74. The movie with the most sex in it that I have ever seen in a movie theatre is:

_____

(Write the name of the movie here)

- ❑ I have never seen a movie at the theatre that had much sex in it *(go to #75)*

74 a. The person who bought my ticket was:

- ❑ me *(go to #75)*
- ❑ a friend my age
- ❑ an older friend
- ❑ my parent
- ❑ a friend's parent
- ❑ older brother or sister
- ❑ other:_____

74 b. They stayed and watched the movie with me: ❑ yes ❑ no

Video and DVD

The next questions ask about the types of movies you and your friends watch on video and DVD.

If you have never seen a movie on video or DVD outside of school, go to the next section, The Internet, starting at #86.

75. When I watch a movie on video or DVD, I check the age rating:

- ❑ never *(go to #77)*
- ❑ rarely
- ❑ sometimes
- ❑ most of the time
- ❑ every time I rent a movie

76. I check the rating: *(check all that apply)*

- ❑ so parents will let me watch it
- ❑ to make sure I am old enough to rent it
- ❑ to make sure there will be some violence, sex, or scary stuff in it
- ❑ to make sure there is *little or no* violence, sex, or scary stuff in it
- ❑ other reason: *(explain)*

_____

_____

77. The scariest movie I have ever seen on video or DVD is:

_____

(Write the name of the movie here)

- ❑ I have never watched a scary movie on video or DVD *(go to #78)*

77a. The person who rented or bought it was:

- ❑ me
- ❑ my parent
- ❑ a friend's parent
- ❑ a friend my age
- ❑ an older brother or sister
- ❑ a younger brother or sister
- ❑ other: (*who*) _____

77b. I watched it with: *(Check all that apply)*

- ❑ my parent
- ❑ a friend's parent
- ❑ a friend or friends my age
- ❑ an older brother/s or sister/s
- ❑ younger brother/s or sister/s
- ❑ alone
- ❑ other: (*who*) _____

78. The most violent movie I have ever seen on video or DVD is:

_____

(Write the name of the movie here)

- ❑ I have never watched a violent movie on video or DVD *(go to #79)*

78a. The person who rented or bought it was:

- ❑ me
- ❑ my parent
- ❑ a friend's parent
- ❑ a friend my age
- ❑ an older brother or sister
- ❑ a younger brother or sister
- ❑ other: *(who)* _____

78b. I watched it with: *(Check all that apply)*

- ❑ my parent
- ❑ a friend's parent
- ❑ a friend or friends my age
- ❑ an older brother or sister
- ❑ younger brother or sister
- ❑ alone
- ❑ other: _____

79. The movie with the most sex in it I have ever seen on video or DVD is:

_____

(Write the name of the movie here)

- ❑ I have never watched a movie with sex in it on video or DVD (go to #80)

79a. The person who rented or bought it was:

- ❑ me
- ❑ my parent
- ❑ a friend's parent
- ❑ a friend my age
- ❑ an older brother or sister
- ❑ a younger brother or sister
- ❑ other: *(who)* _____

79b. I watched it with: *(Check all that apply)*

- ❑ my parent
- ❑ a friend's parent
- ❑ a friend or friends my age
- ❑ an older brother/s or sister/s
- ❑ younger brother/s or sister/s
- ❑ alone
- ❑ other: *(who)*_____

80. I have watched a pornographic movie (*a movie that was mostly people having sex, with very little story*) on video or DVD:

- ❑ never *(go to # 84)*
- ❑ once
- ❑ between 2 and 5 times
- ❑ between 5 and 10 times
- ❑ more than 10 times
- ❑ too many times to count

81. I have watched a pornographic movie on video or DVD with: *(check all that apply)*

- ❑ alone
- ❑ male friend
- ❑ female friend
- ❑ group of guys
- ❑ group of girls
- ❑ brother or sister
- ❑ other: (*who*)_____

82. I have been able to watch a pornographic movie on video or DVD because: *(check all that apply)*

- ❑ someone over 18 rented/bought it
- ❑ I rented/bought it
- ❑ it was at someone's house
- ❑ other: *(how were you able to see it?)*

_____
_____

83. I have gotten together with friends just to watch a pornographic movie:

- ❑ no
- ❑ yes, once
- ❑ yes, a few times
- ❑ yes, a lot of times

84. I haven't watched a pornographic movie on video or DVD because: *(check all that apply)*

- ❑ It doesn't interest me/ I don't want to
- ❑ It would be too much for me
- ❑ It is against the rules for me to watch that kind of stuff
- ❑ My parents don't want me to see movies like that
- ❑ I don't have an opportunity to watch them, but I would if I could
- ❑ other reason: *(explain)*

_____
_____

85. How many of your friends have watched pornographic movies on video or DVD?

- ❑ none of them have
- ❑ one or two of them have
- ❑ some of them have
- ❑ most of them have
- ❑ all of them have
- ❑ I don't know

Internet

The next questions are about how you and your friends have used the Internet.

If you have never used the Internet outside of school, please go to next section, Specialty TV, starting at #93.

86. I know how to hide where I have been on the Internet:

❑ yes ❑ no

87. I have seen pornography on the Internet:

- ❑ never *(go to #89)*
- ❑ once
- ❑ less than five times
- ❑ between 5 and 10 times
- ❑ more than 10 times

❑ too many times to count

87 a. When I saw pornography on the Internet, it was:

❑ on purpose ❑ by accident ❑ both

88. I have looked at pornography (porn site) on the Internet with: *(check all that apply)*

❑ alone
❑ male friend
❑ female friend
❑ group of guys
❑ group of girls
❑ brother or sister
❑ other: *(who)* _____

89. I haven't looked at pornography on the Internet because: *(check all that apply)*

❑ It doesn't interest me
❑ I don't want to look at it
❑ It is against the rules to look at it
❑ My parents don't want me looking at it
❑ I haven't had an opportunity to look at it
❑ I don't know how to find it
❑ other reason: *(explain)*

_____

90. How many of your friends have looked at pornography on the Internet?

❑ one or two of them
❑ several of them
❑ all of them
❑ none of them
❑ I don't know

91. I have seen something very gory or violent on the Internet:

❑Yes ❑No *(go to #92)*

If yes, describe what you looked at

_____
_____
_____

How did you find it?

❑ on purpose ❑ by accident ❑ both

92. Is there anything you wish you had never seen on the Internet?

❑Yes ❑No

If yes, what was it?:

_____
_____

Specialty TV

The next question asks about how you use specialty TV.

If you have never watched satellite, digital or pay TV, go to Video and Computer games, starting at #95.

93. I have watched a show(s) that was for *adults-only* on: *(check all that apply)*

❑direct to home video
❑satellite television
❑digital television
❑pay TV
❑I have never watched a show I knew was for *adults-only* on any of these *(go to #95)*

94. How did you know the show(s) were for *adults-only*?

_____
_____

Video and Computer Games

The next questions are about video and computer games.

If you have never played video or computer games, go to Some Facts About My Family and I, starting at #102.

95. I buy or rent my own video or computer games:

- ❑ always
- ❑ sometimes
- ❑ never (go to #97)

96. I have bought or rented a game rated M or A:

- ❑ never
- ❑ once
- ❑ a few times
- ❑ many times
- ❑ always
- ❑I don't know

97. When choosing a video or computer game to play, I check the age rating:

- ❑ always
- ❑ sometimes
- ❑ most of the time
- ❑ depends who I will be playing with
- ❑ never *(go to #99)*

98. I check the rating: *(Check all that apply)*

- ❑ So parents will let me play it
- ❑ So I will be able to rent/buy it
- ❑ to make sure there will be some violence, sex, or scary stuff in it
- ❑ to make sure there is *little or no* violence, sex, or scary stuff in it
- ❑ other reason *(explain):*

_____

_____

99. I have played a game rated M or A:

- ❑ never
- ❑ once
- ❑ a few times
- ❑ a lot of times
- ❑ always
- ❑I don't know

100. The most violent video or computer game I have ever played is:

_____

(Write the name of the game here)

- ❑ I have never played a violent game

101. The video/computer game I have played that had the most nudity or sex in it is

_____

(Write the name of the game here)

- ❑ I have never played a computer or video game with nudity or sex in it

Some Facts About My Family and I

The next questions are about you and your family.

102. I am _____ years old.

103. I am ❑ female ❑ male

104. My parents live:

- ❑ together *(go to #105)*
- ❑ apart
- ❑ I only have one parent *(go to #105)*

My living arrangement is best described this way:

- ❑ I spend equal time at both homes
- ❑ I live in one home and visit the other parent's home
- ❑ I only spend time at one parent's home
- ❑ other: *(explain)*

_____

105. The people in my home include: *(Check all that apply)*

- ❑ Mom
- ❑ Dad
- ❑ Stepmom
- ❑ Stepdad
- ❑ Older brother(s) number___
- ❑ Older sister(s) number___
- ❑ Younger brother(s) number___
- ❑ Younger sister(s) number___
- ❑ Other:

(who) _____

106. One or both of my parents graduated from college or university:

❑yes ❑no ❑I don't know

107. My marks in English/Language Arts

108. My marks in math are usually:

- ❑ under 50%
- ❑ between 50 and 65%
- ❑ between 65 and 80%
- ❑ over 80%

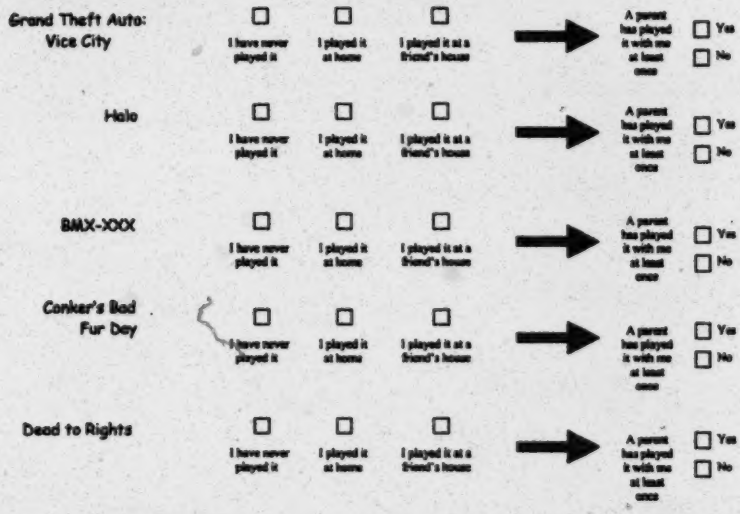
are usually:

- ❑ under 50%
- ❑ between 50 and 65%
- ❑ between 65 and 80%
- ❑ over 80%

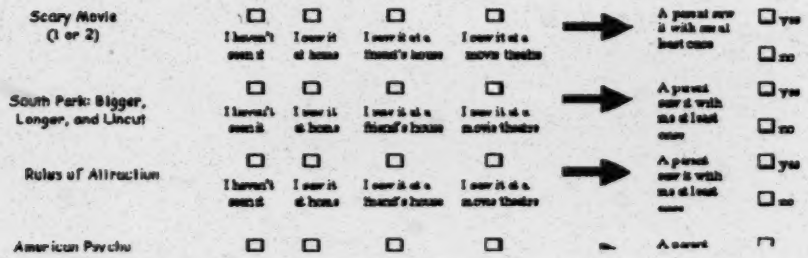
109. I have: *(Check all that apply)*

- ❑One or two friends I spend most of my time with
- ❑Fewer friends than most people I know
- ❑About the same number of friends as most people I know
- ❑More friends than most people I know

For the following list of video game titles, please check the box that indicates where you have played the game, and then indicate if a parent (your parent or a friend's parent) has played it with you.
If you have played it in more than one place, check all the boxes that apply.


Grand Theft Auto: Vice City
I have never played it
I played it at home
I played it at a friend's house
A parent has played it with me at least once
Yes
No
Halo
I have never played it
I played it at home
I played it at a friend's house
A parent has played it with me at least once
Yes
No
BMX-XXX
I have never played it
I played it at home
I played it at a friend's house
A parent has played it with me at least once
Yes
No
Conker's Bad Fur Day
I have never played it
I played it at home
I played it at a friend's house
A parent has played it with me at least once
Yes
No
Dead to Rights
I have never played it
I played it at home
I played it at a friend's house
A parent has played it with me at least once
Yes
No

For each movie title listed, please put a check in the box indicating where you saw the movie. Then, check a box to indicate if a parent (your parent or a friend's parent) watched it with you. If you have seen a movie more than once, check all the boxes that apply.


Scary Movie (1 or 2)
I haven't seen it
I saw it at home
I saw it at a friend's house
I saw it at a movie theatre
A parent saw it with me at least once
yes
no
South Park: Bigger, Longer, and Uncut
I haven't seen it
I saw it at home
I saw it at a friend's house
I saw it at a movie theatre
A parent saw it with me at least once
yes
no
Rules of Attraction
I haven't seen it
I saw it at home
I saw it at a friend's house
I saw it at a movie theatre
A parent saw it with me at least once
yes
no
American Psycho

Thank you very much for participating in this study. Your time and effort are very much appreciated. Please fill out the draw forms below.

Good luck!

To enter the draw for a pair of movie passes, please write your name here.

First name: _____

Put this entry form in the draw container.

Tear the page in half along this line to separate you draw entry forms.

To enter the draw for a DVD player,
write your name and the name of your school here.

First and last name: _____

School: _____

Your teacher will put this entry form into an envelope to go to the University for the final draw.

APPENDIX 'J'

Design and Scoring of Questionnaire Items for Indices

Design and Scoring of Questionnaire Items for Indices

Although the questions are written to collect data at the ordinal level, the amalgamation of discrete questionnaire items into indices was an attempt to approximate an interval scale so that the aggregate responses could be used in parametrical statistical analysis. This was done by assigning point values to responses that were either: averages of the range of frequencies in the answers; or, assigning one point for a characteristic that was present or no points for a characteristic that was absent. The resulting scales are more sensitive to capturing patterns in the data by imposing an approximation of an interval scale.

Access to Sexually Explicit Media

This variable measures the frequency with which participants report having watched sexually explicit content on video and DVD, the Internet, and "Adult-Only" shows on specialty TV. It was created by adding the points given for responses to the following questions:

80. I have watched a pornographic movie (a movie that was mostly people having sex, with very little story) on video or DVD:

- ❑ Never (0)
- ❑ Once (1)
- ❑ Between 2 and 5 times (3)
- ❑ Between 5 and 10 times (7)
- ❑ More than 10 times (15)
- ❑ Too many times to count (25)

87. I have seen pornography on the Internet

- ❑ Never (0)
- ❑ Once (1)
- ❑ Between 2 and 5 times (3)
- ❑ Between 5 and 10 times (7)
- ❑ More than 10 times (15)
- ❑ Too many times to count (25)

93. I have watched a show(s) that was for "adults-only" on:
    - ❑ Direct to home video (1)
    - ❑ Satellite television (1)
    - ❑ Pay TV (1)
    - ❑ I have never watched a show I knew was for "adults-only" on any of these (0)

The highest possible total score a respondent could receive for the variable Frequency of Access to Sexually Explicit Media is 54.

Peer Influence

This variable measures participants' perceptions of peer use of sexually explicit media and social use of sexually explicit media. It was created by adding the points given for responses to the following questions:

85. Number of friends who have watched pornography on video/DVD

    - ❑ None (0)
    - ❑ one or two (2)
    - ❑ several (4)
    - ❑ most (6)
    - ❑ all (8)
    - ❑ I don't know (0)

90. Number of friends who have seen pornography on the Internet:

    - ❑ None (0)
    - ❑ one or two (2)
    - ❑ several (4)
    - ❑ most (6)
    - ❑ all (8)
    - ❑ I don't know (0)

81. I have watched a pornographic movie on video or DVD with:

    - ❑ alone (0)
    - ❑ male friend (1)
    - ❑ female friend (1)
    - ❑ Group of guys (1)
    - ❑ group of girls (1)
    - ❑ Brother or sister (1)

- ❑ Other (1)

82. I have been able to watch a pornographic movie on video or DVD because:

- ❑ Someone over 18 rented or bought it (0)
- ❑ I rented/bought it (0)
- ❑ It was at someone's house (1)
- ❑ Other (0)

83. I have gotten together with friends just to watch a pornographic movie:

- ❑ No (0)
- ❑ Yes, once (1)
- ❑ Yes, a few times (3)
- ❑ Yes, a lot of times (7)

88. I have looked at pornography on the Internet with:

- ❑ alone (0)
- ❑ male friend (1)
- ❑ female friend (1)
- ❑ Group of guys (1)
- ❑ group of girls (1)
- ❑ Brother or sister (1)
- ❑ Other (1)

The highest possible total score a respondent could receive for the variable Peer Influence is 32.

Interest in Sexual Content

This variable measures participants' stated interest in sexual content. It was created by adding the points given for responses to the following questions:

55. I would be interested in watching a movie with these warnings on it
(score 1 for checking "sexual content")

56. I would avoid a movie…
(score 1 for not checking sexual content)

81. I have been able to watch a pornographic movie on video or DVD because:

- ❑ Someone over 18 rented or bought it (0)

- ❑ I rented/bought it (1)
- ❑ It was at someone's house (0)
- ❑ Other (0)

84. I haven't watched a pornographic movie on video or DVD because:

- ❑ It doesn't interest me (0)
- ❑ It would be too much for me (0)
- ❑ It is against the rules (0)
- ❑ My parents don't want me to see movies like that (0)
- ❑ I don't have an opportunity to watch them, but I would if I could (1)
- ❑ Other reason (0)

(score 1 for not having checked "It doesn't interest me")

87a. When I saw pornography on the Internet it was:

- ❑ on purpose (1)
- ❑ by accident (0)
- ❑ both (1)

89. I haven't looked at pornography on the Internet because:

- ❑ It doesn't interest me (0)
- ❑ It would be too much for me (0)
- ❑ It is against the rules (0)
- ❑ My parents don't want me to see movies like that (0)
- ❑ I don't have an opportunity to, but I would if I could (1)
- ❑ Other reason (0)

(score 1 for not having checked "It doesn't interest me")

The highest possible total score a respondent could receive for the variable Interest in Sexual Content is 8.

Media Environment

This variable tallies the number of media platforms in students' homes, bedrooms, and the number of media platforms they use in friends' homes. It was created by adding the points given for responses to the following questions:

1. The media in my house include: (Check all that apply):

   - ❑ TV (1)
   - ❑ Cable TV (1)

- ❑ VCR (1)
- ❑ DVD player (1)
- ❑ Digital TV (1)
- ❑ Satellite TV (1)
- ❑ Pay per view TV (1)
- ❑ Internet (1)
- ❑ Game console or computer for playing games (1)

2. The media in my bedroom include: (Check all that apply)

- ❑ TV (1)
- ❑ Cable TV (1)
- ❑ VCR (1)
- ❑ DVD player (1)
- ❑ Digital TV (1)
- ❑ Satellite TV (1)
- ❑ Pay per view TV (1)
- ❑ Internet (1)
- ❑ Game console or computer for playing games (1)

3. Media I have used in other peoples' houses includes: (Check all that apply)

- ❑ DVD or VCR (1)
- ❑ Satellite television (1)
- ❑ Digital television (1)
- ❑ Pay TV (1)
- ❑ Internet (1)
- ❑ Video or computer games (1)

The highest possible total score a respondent could receive for the variable Media Environment is 24.

Restrictive Parent Mediation

This measures respondents' perceptions about restrictive parental mediation. It was created by adding the points given for responses to the following questions:

2. My parents use: (Check all that apply)

- ❑ V-chip on the TV so I can't watch certain shows (2)
- ❑ Blocking software on the computer to block certain websites (2)
- ❑ No parental controls on TV or computer (0)
- ❑ I don't know if they use anything like that (1)

(A total of 3 points were given for this question if the respondent indicated blocking technology on both TV and computer)

22. My parents have rules about what kind of movies I am allowed to rent or watch at home

- ❑ Yes (1)
- ❑ No (0)

26. In my home, the rules about TV, DVD, and VCR use are enforced:

- ❑ Never (0)
- ❑ Rarely (1)
- ❑ Sometimes (2)
- ❑ Most of the Time times (3)
- ❑ Each time I see a movie (4)

27. When I rent movies, my parents check the age rating:

- ❑ Never (0)
- ❑ Rarely (1)
- ❑ Sometimes (2)
- ❑ Most of the Time times (3)
- ❑ Each time I see a movie (4)
- ❑ I don't rent my own movies (4)

24. When a parent catches you breaking the rules at home, what happens?

- ❑ They never catch me (0)
- ❑ Nothing happens (0)
- ❑ They get mad but nothing happens (0)
- ❑ I lose TV, VCR, and or DVD privileges (1)
- ❑ I get punished (1)
- ❑ We discuss it (0)

30. My parents have talked to video store staff about movies they don't want the store to rent to me:

- ❑ Yes (2)
- ❑ No (0)
- ❑ I don't know (1)

33. My parents have rules about how I am allowed to use digital, satellite, or pay TV:

- ❑ Yes (1 if rules are present but respondent indicated elsewhere that they do not have specialty TV in the home, 2 if respondent also indicated that they have specialty TV in the home)
- ❑ No (0 if specialty TV is present in the home, 1 if respondent indicated specialty TV is present in the home)

47. Adults do a good job of keeping me away from adult-only stuff on the Internet:

    - ❑ Yes (1)
    - ❑ No (0)

51. Someone checks where I have been on the Internet:

    - ❑ Yes (2)
    - ❑ No (0)
    - ❑ I don't know (1)

The highest possible total score a respondent could receive for the variable Restrictive Parent Mediation is 21.

Nonrestrictive Parent Mediation

This measures respondents' perceptions about nonrestrictive parental mediation. It was created by adding the points given for responses to the following questions:

13. My parents have talked to me about the type of movies I watch

    - ❑ Never (0)
    - ❑ Rarely (1)
    - ❑ A few times (2)
    - ❑ Many times (3)
    - ❑ Each time I see a movie (4)

14. The type of movies that my parents have told me they are most concerned about me watching is [Author's note: many students gave more than one response, so one point was given for each type of content parents have stated concern about even if it is not related to sexual content]

    - ❑ Movies with violent content (1)
    - ❑ Movies with sexual content (1)
    - ❑ Movies with bad language (1)
    - ❑ Other (1)
    - ❑ They haven't told me what they are most concerned about (0)

15. Adults do a good job explaining why there are certain movies they don't want me to watch

- ❑ Yes (1)
- ❑ No (0)

24. When a parent catches you breaking the rules at home, what happens?

- ❑ They never catch me (0)
- ❑ Nothing happens (0)
- ❑ They get mad but nothing happens (1)
- ❑ I lose TV, VCR, and or DVD privileges (0)
- ❑ I get punished (0)
- ❑ We discuss it (1)

34. My parents talk to me about the types of adult-only shows that are on specialty TV:

- ❑ Never (0)
- ❑ Rarely (1)
- ❑ Sometimes (3)
- ❑ A lot (4)

(2 points were given here if respondents indicated in another section that they do not have specialty television in the home)

35. The types of adults-only shows my parents are most concerned about me watching are: (Check all that apply)

- ❑ Shows with violent content (1)
- ❑ Shows with sexual content (1)
- ❑ Shows with bad language (1)
- ❑ Other (1)
- ❑ They haven't told me what they are most concerned about (0)

48. My parents talk to me about the types of websites I visit:

- ❑ Never (0)
- ❑ Rarely (1)
- ❑ Sometimes (3)
- ❑ A lot (4)

(2 points were given here if respondents indicated in another section that they do not have Internet in the home)

49. The type of websites that my parents have told me they are most concerned about me using are:

- ❑ Chat rooms (1)
- ❑ Websites with violent/gory content (1)
- ❑ Websites with sexual content (1)
- ❑ Websites with hateful (1)
- ❑ Other (1)
- ❑ They haven't told me what they are most concerned about (0)

50. My parents have talked to me about pornography on the Internet:

- ❑ Yes (1)
- ❑ No (0)

The highest possible total score a respondent could receive for the variable Nonrestrictive Parent Mediation is 28.

APPENDIX 'K'

Descriptive Statistics and Analysis of Variance for Discrete Questionnaire Items

Descriptive Statistics and Analysis of Variance for Discrete Questionnaire Items

Access to Sexually Explicit Media

Media platforms adolescents use to access sexually explicit media content. The majority of the sample, 74% (n= 315), reported having seen pornography on the Internet. Forty-one percent of sample (n=164) reported having seen pornography on video or DVD. Fifty-seven percent of the sample who have seen specialty TV (n= 181) report having watched a show for "adults only" on at least one specialty TV platform.

Boys are more likely than girls to have accessed pornography on the Internet, X^2 $(5, N = 393) = 71.07, p < .001$, (see Table 19). Boys were also more likely to report having viewed multiple times. There were no statistically significant differences between urban and rural participants in terms of their frequency of accessing pornography on the Internet, X^2 $(5, N = 398) = 3.44$, *ns*.

Boys are more likely than girls to report having accessed pornography on DVD or video (see Table 20), X^2 $(5, N = 393) = 66.59, p < .001$, with boys more likely to report having viewed multiple times. Rural participants are also more likely to report having viewed pornography on DVD or video and viewing multiple times (see Table 21), X^2 $(5, N = 398) = 13.15, p < 0.05$, with.

Boys are more likely than girls to report having accessed "Adult-Only" shows on specialty TV platforms, X^2 $(4, N = 312) = 39.26, p < 0.001$, (see Table 22), and more boys than girls reported having seen "Adult-Only" shows on each type of specialty TV platform (see Table 23).

Table 19

Percentages of Boys and Girls Reporting Frequency of Viewing Pornographic Material on the Internet

Frequency	Boys (n=160)	Girls (n=237)	Overall (n=397)
Never	12	28	22
Once	14	27	22
Less than 5 times	14	22	19
Between 5 and 10 times	14	11	12
More than 10 times	12	3	7
Too many times to count	35	8	19

Note. N<425 because 23 participants did not state their gender 5 other cases were missing data on this variable

Table 20

Percentages of Boys and Girls Reporting Frequency of Viewing Pornographic Material on DVD or Video

Frequency	Boys (n=157)	Girls (n=236)	Overall (n=393)
Never	40	73	60
Once	11	13	12
Less than 5 times	15	8	11
Between 5 and 10 times	6	2	4
More than 10 times	0	4	2
Too many times to count	24	4	12

Note. N<425 because 23 participants did not state their gender and 9 cases were missing data for this variable.

Table 21

Percentages of Urban and Rural Participants Reporting Frequency of Viewing Pornographic Material on DVD or Video

Frequency	Urban (n=264)	Rural (n=134)	Overall (n=398)
Never	63	51	59
Once	13	10	12
Less than 5 times	10	12	11
Between 5 and 10 times	3	5	4
More than 10 times	1	4	2
Too many times to count	9	19	12

Note. N<425 because 2 cases were missing data on this variable.

Table 22

Percentages of Boys and Girls Reporting Viewing "Adult-Only" Shows by Number of Specialty TV Platforms

Number of Platforms	Boys (n=124)	Girls (n=185)	Overall
Never	26	55	43
One	44	38	41
Two	11	5	8
Three	7	2	4
Four	11	1	5

Note. N<425 because 23 participants did not state their gender 92 respondents had not watched specialty TV.

Table 23

Percentages of Boys and Girls Reporting Viewing "Adult-Only" Shows by Type of Specialty TV Platform

Type of Specialty TV Platform	Boys (n=124)	Girls (n=186)	Overall (n=310)	Statistical Significance of Gender
Direct to Home Video	32	13	21	$X^2(1, N = 310) = 14.73, p < 0.001$
Satellite TV	48	24	33	$X^2(1, N = 310) = 19.20, p < 0.001$
Digital TV	31	10	19	$X^2(1, N = 310) = 22.06, p < 0.001$
Pay Per View TV	24	10	16	$X^2(1, N = 310) = 10.92, p < 0.001$
Have never seen "Adult-Only" Show on Specialty TV	26	54	43	$X^2(1, N = 310) = 14.73, p < 0.001$

Note. N<425 because 23 participants did not state their gender 92 respondents had not watched specialty TV.

Urban and rural differences in the number of specialty TV platforms on which participants report having viewed "Adult-only" shows are not statistically significant, X^2 (4, N = 316) = 2.46, *ns*. However, rural participants were more likely to have seen "Adult-Only" shows on satellite TV, X^2 (1, N = 314) = 21.25, $p < 0.001$, but urban participants were more likely to have viewed "Adult-Only Shows" on digital TV, X^2 (1, N = 314) = 6.46, $p < 0.05$; differences between urban and rural participants for their viewing on other specialty TV platforms are not statistically significant.

Interest in Sexual Content

Deliberate use of sexually explicit content. Of the 308 participants who had seen pornography on the Internet, 60% had sought the content out deliberately at least once. Boys were more likely to report that they deliberately sought out sexually explicit content on the Internet (75%), x^2 (1, N=402) = 28.6, $p<0.001$, whereas just less than half (48%) of these girls reported deliberate seeking out such content. Of the participants who had seen pornography on video or DVD (n=164), 2% of the girls and 11% of the boys reported renting the video or DVD themselves, x^2 (1, N=164) = 4.1, $p<0.05$.

Reasons for avoiding sexually explicit content. Tables 24 and 25 show reported reasons for not viewing pornography on DVD or video or on the Internet, and statistically significant gender differences for the reasons reported. Lack of interest was the reason most frequently reported by girls for not viewing pornographic content on both media platforms, whereas boys most frequently reported that their lack of viewing such content was due to parents not allowing it.

Table 24

Percentages of Boys and Girls Reporting Reasons for Avoiding Pornographic Content on Video and DVD

Reason	Boys (N=161)	Girls (N=241)	Statistical Significance of Gender
It did not interest them	12%	62%	x^2 (1, N=402) = 99.3, p<0.001
It was "too much" for them	5%	15%	x^2 (1, N=402) = 10.47, p=0.001
Against the rules	12%	20%	x^2 (1, N=402) = 4.2, $p \leq 0.05$
Parents won't allow it	21%	25%	x^2 (1, N=402) = 0.94, *ns*
Haven't had a chance but would if they could	8%	3%	x^2 (1, N=402)= 6.69, p<0.05

Note. N<425 because 23 participants did not state their gender.
Participants were allowed to indicate multiple reasons.

Table 25

Percentages of Boys and Girls Reporting Reasons for Avoiding Pornographic Content on the Internet

Reason	Boys (N=161)	Girls (N=241)	Statistical Significance of Gender
It did not interest them	12%	58%	x^2 (1, N=402) = 84, p<0.001
I don't want to look at it	9%	46%	x^2 (1, N=402) = 60.55, p<0.001
Against the rules	12%	21%	x^2 (1, N=402) = 5.07, p<0.05
Parents won't allow it	16%	29%	x^2 (1, N=402) = 9.25, p<0.05
Haven't had a chance	3%	3%	x^2 (1, N=402) = 0.01, *ns*
I don't know how to find it	5%	2%	x^2 (1, N=402) = 2.1, *ns*

Note. Participants were allowed to indicate multiple reasons.
N<425 because 23 participants did not state their gender.

Interest in sexual content and frequency of use of sexually explicit media.

Participants who stated a high level of interest in viewing sexual content also reported high frequencies for viewing porn on video/DVD. Participants were asked to indicate which content advisories would make them interested in watching a movie. They were also asked to state the frequency with which they have viewed pornographic movies on video or DVD. Stated interest in watching a movie with a sexual content warning was a statistically significant variable for the frequency with which participants had viewed pornography on video or DVD, x^2 (5, N=402) = 127, p<0.001. Of the 35% of participants (N=140) who reported that they would be interested in watching a movie with sexual content, 32% had watched a pornographic movie on video or DVD "too many times to count". Of participants who stated that they would *not* be interested in watching a movie with sexual content warning, only 2% had watched pornography on video or DVD "too many times to count". Of girls who stated interest in watching a movie with a sexual content warning (N=55), 16% had watched a pornographic movie on video or DVD "too many times to count" compared to no reported cases of viewing a pornographic movie o n video or DVD "too many times to count" from girls who had not stated an interest in movies with sexual content warnings (N=182), x^2 (5, N=237) = 60, p<0.001. Of boys who stated interest in watching a movie with a sexual content warning (N=82), 42% had watched a pornographic movie on video or DVD "too many times to count" compared to 5% of boys who stated that they were not interested in viewing a movie with a sexual content warning (N=78), x^2 (5, N=160) = 41, p<0.001.

Participants who stated a high level of interest in viewing sexual content also reported having used multiple specialty TV platforms for viewing "Adult-Only" shows.

Participants were asked to indicate which content advisories would make them interested in watching a movie. They were also asked to state the number of specialty television platforms they have used to view "Adult-Only" shows. Stated interest in watching movies with sexual content warnings is a statistically significant variable for watching "Adult-Only" shows on more than one specialty television platform, x^2 (4, N=313)= 67.7, p<0.001. Of the 313 participants who have seen "Adult-Only" shows on specialty television, 37% (N=115) stated an interest in watching movies with sexual content warnings. Twelve percent (n=14) of the participants who stated an interest in sexual content had seen "Adult-only" shows on all four specialty television platforms listed, compared to less than 1% of the participants who stated that they are not interested in watching movies with sexual content warnings.

Girls who had stated an interest in watching sexual content and had seen specialty television (n=48), 29% had never seen an "Adult-Only" show, whereas 64% of girls who did not express and interest in sexual content but had seen specialty television (n=137) had never seen an "Adult-only" show, x^2 (4, N=185) = 19.5, p=0.001.

Boys who had stated an interest in watching sexual content and had seen specialty television (n=65), 11% had never seen an "Adult-only" show, whereas 42% of girls who did not express and interest in sexual content but had seen specialty television (n=59) had never seen an "Adult-only" show, x^2 (4, N=124) = 34.3, p<0.001.

Participants who stated a high level of interest in viewing sexual content also reported high frequencies of deliberate viewing of pornography on the Internet. Participants who had stated an interest in watching a movie with sexual content also had a high frequency of viewing pornography online and doing so deliberately. Of the 19%

of participants who have seen pornography on the Internet "too many times to count, 81% (N=62) have stated they would be interested in watching a movie with a sexual content warning, x^2 (5, N=398) = 138.17, p<0.001. Eighty-six percent of the sample who had seen pornography on the Internet "on purpose" (N=49) (as opposed to accidental exposure) had also stated an interest in watching a movie with a sexual content warning. Eighty-one percent of participants who reported that they had only accidental exposure to pornography online (N=130) also stated they would not be interested in watching a movie with sexual content, x^2 (3, N=325) = 99.5, p<0.001. Gender differences are not statistically significant around reporting high interest in sexual content and deliberately seeking out pornographic content online.

Peer Influence Index

Contexts for access. Table 26 shows reported contexts, social or solitary, for viewing sexually explicit content on video and DVD and the Internet. Boys are significantly more likely to view in a combination of social and solitary contexts than are girls on both media. Boys are more likely to have viewed sexually explicit content on video or DVD in a solitary context than any other, whereas girls are more likely to have viewed socially. Boys and girls are both more likely to have only viewed in solitary contexts on the Internet than on video or DVD.

Tables 27 and 28 show reported social contexts for viewing sexually explicit content on video and DVD and on the Internet. Boys are significantly more likely to view sexually explicit content with other boys (both in pairs and groups) on both media, and girls are significantly more likely to view with a single friend on the Internet.

Boys reported "getting together with friends" to watch pornography on video or DVD significantly more frequently than did girls. Ninety-five percent of girls and 74% of boys reported never "getting together with friends" expressly to watch pornographic videos or DVDs, but 9% of boys (compared to 1% of girls) reported doing so "many times", x^2 (3, N=397)= 37.7, p<0.001. The mean number of times boys reported "getting together with friends" to watch pornography on video or DVD is 1.1, whereas the mean for girls is 0.2 (F (3, 396) = 27.5, p< 0.001).

Table 26

Percentages of Girls and Boys Reporting Contexts for Viewing Sexually Explicit Content on the DVD and Video and on the Internet

Context	Girls (N=238)	Boys (N=158)
Video or DVD*		
Only experienced solitary viewing	8%	31%
Only experienced social viewing	22%	10%
Experienced both social and solitary viewing	5%	25%
Has never viewed sexually explicit content	72%	38%
Internet**		
Only experienced solitary viewing	32%	37%
Only experienced social viewing	27%	22%
Experienced both social and solitary viewing	12%	27%
Has never viewed sexually explicit content	27%	11%

Note. N<425 because 23 participants did not state their gender.

Column totals not equal to 100% because of missing cases.

*x^2 (4, N=402) = 60.5, p<0.001** x^2 (4, N=402) = 25.5, p<0.001

Table 27

Percentages of Girls and Boys Reporting Social Contexts for Viewing Sexually Explicit Content on Video and DVD

Context	Girls (N=238)	Boys (N=158)	Statistical Significance of Gender
With a male friend	5%	20%	x^2 (1, N=396) = 20.6, p<0.001
With a female friend	10%	10%	x^2 <1, *ns*
With a group of guys	7%	2%	x^2 (1, N=396) = 18.8, p<0.001
With a group of girls	10%	8%	x^2 <1, *ns*
With a sibling	2%	4%	x^2 (1, N=396) = 1.8, *ns*
Someone other than listed above	6%	6%	x^2 <1, *ns*

Note. N<425 because 23 participants did not state their gender, and 6 cases were missing data on this variable.

Table 28

Percentages of Girls and Boys Reporting Social Contexts for Viewing Sexually Explicit Content on the Internet

Context	Girls (N=238)	Boys (N=158)	Statistical Significance of Gender
With a male friend	8%	31%	x^2 (1, N=394) = 33.9, p<0.001
With a female friend	22%	10%	x^2 (1, N=394) = 10.9, p<0.001
With a group of guys	5%	25%	x^2 (1, N=394) = 32.8, p<0.001
With a group of girls	11%	6%	x^2 (1, N=394) = 2.8, *ns*
With a sibling	3%	6%	x^2 (1, N=394) = 3.6, *ns*
Someone other than listed above	8%	6%	x^2 <1, *ns*

Note. N<425 because 23 participants did not state their gender, and 8 cases were missing data on this variable.

Estimates of peer access. Table 29 shows the reported estimated number of peers who have seen pornography both on video and DVD and online. Rural boys reported the highest estimates, followed by urban boys, rural girls, and urban girls. Participants tended to estimate that similar numbers of peers had seen sexually explicit content on both media platforms.

Table 29

Means for Estimates of Number of Peers Who Have Viewed Sexually Explicit Content on Video or DVD or the Internet for Girls (N=241) and Boys (N=161)

	DVD or Video*		
	Mean	Standard Deviation	N
Urban Girls	2.9	1.9	162
Rural Girls	3.1	2.2	79
Urban Boys	4.2	2.4	105
Rural Boys	4.5	2.8	56
	Internet**		
	Mean	Standard Deviation	
Urban Girls	2.9	1.7	159
Rural Girls	3.0	2.0	77
Urban Boys	4.2	2.5	101
Rural Boys	4.5	2.5	55

Note. N<425 because 23 participants did not state their gender, and 10 cases for Internet are missing data on this variable.
*F (3, 402) = 12.6, p< 0.001, ** F (3, 392) = 14.5, p< 0.001.

Media Environment Index

Home media environment. Participants were asked to report which of the following media platforms they had access to in their home, in their bedroom, and in friends' homes: television, a basic cable connection for the TV, videocassette recorder (VCR), digital videodisk player (DVD), digital television service, satellite television service, any type of pay per view service, Internet connection, and video or computer game platform. Of the nine platforms participants were asked to report on, the mean number of media platforms in participants' homes was 6.1, with a standard deviation of 1.3. The media that participants indicated having access to most frequently in the home (all at rates of over 90%) are televisions, VCR's, and computer or video game platforms. The majority of households also had cable TV service and one or more DVD players. Digital TV was the medium least likely to be found in the home (22%, n=94), followed by satellite TV (30%, n= 129), and pay per view services (33%, n=139).

Gender was not a significant variable to account for which media platforms were present in the home, but geographic location (urban or rural) was a significant variable for the presence of certain media platforms in the home. Although there was no statistically significant difference between urban and rural areas in the mean *number* of media platforms in the home ($x^2(8, N=425) = 12.82$, *ns*), there were differences in the *type* of media platforms in the homes of urban and rural participants. Differences between urban and rural ownership of the following media platforms were statistically significant (see Table 30): More urban homes had a cable connection for the TV; digital TV is more likely to be found in urban homes; more rural homes in the sample had a

satellite dish compared than did urban homes; it was more likely that rural homes accessed pay per view services; internet connections were present in fewer rural homes. The differences between urban and rural ownership of the following media platforms did not approach accepted levels of statistical significance: Household television ownership, VCR ownership, DVD player ownership, or, ownership of computer or video game platforms.

Table 30

Percentages of Urban and Rural Participants Reporting a Variety of Media Platforms in Homes

Type of Media	Urban (n=241)	Rural (n=184)	Overall	Statistical Significance of Geographical Location
Television	100	99	100	X^2 (1, N=425) =3.54, *ns*
Cable TV	82	26	62	X^2 (1, *N*=425) = 132.01, $p< 0.001$
Satellite TV	58	14	30	X^2 (1, *N*=425) = 90.14, $p< 0.001$
Digital TV	25	17	22	X^2 (1, *N*=425) = 3.84, $p= 0.05$
Pay per view TV	25	47	33	X^2 (1, *N*=425) = 21.65, $p< 0.001$
VCR	97	96	97	X^2 (1, *N*=424) =1.71, *ns*
DVD player	76	72	75	$X^2 <1$
Internet connection	96	83	91	X^2 (1, *N*=425)= 18.71, $p< 0.001$
Computer or video game platform	96	96	96	$X^2 <1$

Bedroom media environments. The media platform most likely to be found in the bedrooms of participants was television, followed by computer or video game platforms. The platforms least likely to be in bedrooms of the sample were digital and pay per view TV services. The mean number of media platforms in participants' bedrooms was 1.83; boys had a mean of 2.2 media platforms and girls had a mean of 1.24 platforms in their bedrooms. Gender differences with respect to the presence of given media platforms in the bedrooms of participants were statistically significant for the following platforms (see Table 31): More boys than girls reported having a TV in their bedroom; higher likelihood of DVD players in boys' rooms; more boys reported having satellite TV access in their bedrooms than did girls; more boys than girls reported having a computer or video game platform in their bedroom. Gender did not approach accepted levels of statistical significance as a variable for the presence of the following platforms in bedrooms of participants (although trends may be present): Presence of VCRs in bedrooms; boys reporting more cable TV or digital TV in bedrooms and having more pay per view services accessible from their bedrooms; almost equal numbers of boys and girls reported having Internet access in their bedrooms.

Geographic location (urban versus rural) with respect to the presence of given media platforms in the bedrooms of participants was statistically significant for the following platforms (see Table 32). Participants from urban homes reported having cable TV and Internet connections in bedrooms more frequently; whereas rural homes had more satellite TV and pay per view in bedrooms. Geographic location did not approach accepted levels of statistical significance (although trends may be present) as a variable for the presence of the following platforms in bedrooms of participants: Higher

likelihood of TV, digital television, VCRs, DVD players, and computer or video games in bedrooms of rural homes.

Table 31

Percentages of Boys and Girls

Reporting a Variety of Media Platforms Bedrooms

Type of Media	Boys (n=161)	Girls (n=241)	Overall	Statistical Significance of Gender
Television	55	36	43	$X^2(1, N = 402) = 14.15, p < .001$
VCRs	30	24	26	$X^2(1, N=402) = 1.31, ns$
Cable TV	25	16	19	$X^2(1, N=402) = 4.59, ns$
Satellite TV	8	3	5	$X^2(1, N = 402) = 4.50, p < .05$
Digital TV	5	3	4	$X^2(1, N=402) = 1.80, ns$
Pay per view TV	4	3	4	$X^2 < 1$
DVD players	22	5	12	$X^2(1, N = 402) = 29.61, p < .001$
Internet connection	19	13	15	$X^2(1, N=402) = 2.58, ns$
Computer or video games	58	24	37	$X^2(1, N = 402) = 48.02, p < .001$

Note. N< 425 as 23 participants did not state their gender.

Table 32

Percentages of Urban and Rural Participants Reporting a Variety of Media Platforms in Bedrooms

Type of media	Urban (n=241)	Rural (n=184)	Overall	Statistical Significance of Geographical Location
Television	58	42	43	$X^2 < 1$
Cable TV	24	11	19	$X^2(1, N = 425) = 12.30, p < .001$
Satellite TV	2	11	5	$X^2(1, N = 425) = 15.09, p < .001$
Digital TV	3	5	4	$X^2(1, N = 425) = 2.01$, *ns*
Pay per view TV	2	8	4	$X^2(1, N = 425) = 12.41, p < .001$
VCRs	24	29	26	$X^2 < 1$
DVD players	11	15	12	$X^2(1, N = 425) = 1.64$, *ns*
Internet connection	16	9	15	$X^2(1, N = 425) = 6.60, p < .05$
Computer or video games	37	41	37	$X^2(1, N = 425) = 1.44$, *ns*

Social media environment. Neither geographic location nor gender was statistically significant for the number of platforms accessed in other people's homes.

Restrictive Parent Mediation Index

Presence of rules in the home. There is no statistical significance for gender for participants reporting that there are rules in the home about movies they are allowed to rent or watch, $x^2<1$. Fifty-one percent of the sample (n=211) report that there are rules in their home. There is no statistical significance for gender, x^2 (4, N=401)= 1.3, *ns,* or geographic location, x^2 (4, N=425)= 2.4, *ns*, for participants reporting the frequency with which rules about viewing are enforced in the home—58% (n=247) report that rules are

never enforced or there are no rules, 30% (n=125) report that the rules are rarely or sometimes enforced, and 13% (n=53) report that rules are enforced most or all of the time.

Parental monitoring of age ratings. Gender is not statistically significant for the frequency with which parents check age ratings on movies, but rural respondents were more likely 32% (n=49) than urban 21% (n=54) report that their parents never check age ratings, x^2 (4, N=417)= 10.5, p<0.05.

Blocking technologies. Gender differences for the presence of blocking technologies in the home, (see Table 33), are statistically significant, x^2 (3, N=387) = 14.8, p<0.01, due to the significant gender differences within the rural subgroup of the sample, x^2 (3, N=128) = 19.2, p<0.001, (gender differences within the urban sample were not statistically significant). Rural boys are more likely than any other group in the sample to report that there is no blocking technology in use in their home, and least likely to report not knowing if such technology is in use. Rural girls are most likely to report that such technology is in use, and least likely to report not knowing.

Table 33

Percentages for Boys and Girls Reporting the Use of Blocking Technology in the Home

	No blocking technology used	Don't know
		Rural*
Girls (n=77)	39	39
Boys (n=51)	73	7
		Urban**
Girls (n=160)	57	28
Boys (n=99)	68	22

Note. N<425 because 23 participants did not state their gender, and 15 cases are missing data on this variable.

Statistical significance of gender for overall sample, x^2 (3, N=387) = 14.8, p<0.01.

** Statistical significance of gender for rural sample, x^2 (3, N=128) = 19.2, p<0.001.

Monitoring Internet history. There is no statistical significance for gender, x^2 (2, N=387)= 4.3, ns, or geographic location, x^2 <1, for participants reporting that someone checks where they have been online—42% (n= 172) of participants report that no one checks, 41% of participants (n= 168) report that someone does check, and 17% of participants (n= 71) report that they are not certain if someone checks (N< 425 as 14 cases were coded missing).

Assessment of parent imposed Internet restrictions. Gender was statistically significant, with 56% (n=130) of girls reporting that they think adults do a good job of

keeping them "away from adult-only stuff on the Internet" compared to 43% (n=65) of boys, x^2 (1, N=386)= 6.5, p<0.05.

Nonrestrictive Parent Mediation Index

Parent content concerns for movies. Participants were asked to indicate which type of content they perceive their parents are most concerned about them watching in movies (see Table 34). Although they were only asked to indicate one area, many participants, particularly girls, gave more than one response. Because all of these multiple responses included "sexual content" they were coded as "sexual content and at least one other area of concern": Girls were twice as likely as boys to indicate "sexual content and at least one other area", x^2 (5, N=397) = 23.3, p<0.001. There were no statistically significant differences between urban and rural responses, x^2 (5, N=421) = 1.5, *ns*. Despite the statistically significant gender differences, there was little difference between the number of boys and girls reporting sexual content as their parents' primary concern, although there were differences in each of the other categories. Boys were far more likely to report that their parents haven't told them what content area(s) concern them most.

Table 34

*Percentages for Boys (n= 158) and Girls (n=239) Reporting Parents' Content Area of Most Concern for Movies**

	Boys
Violence	1
Sexual content	39
Bad language	5
Other	6
Sexual content and at least one other area	9
Parent's have not said what concerns them most	40

Note. N<425 because 23 participants did not state their gender, and 5 cases were missing data on this variable.

* Statistical significance of gender, x^2 (5, N=397) = 23.3, p<0.001

Parent concern about specialty television content. Rates of perceived parent concern with sexual content were highest for participants with access to specialty television (See Table 35). Participants were asked what area of content their parents were most concerned about them accessing through "adult-only" shows on specialty television. Nearly half of participants do not perceive that parents have articulated what area of content concerns them most. "Bad language" was not included as a choice in this section of the questionnaire as the researchers were interested primarily in whether sexual or violent content would be perceived as more of a concern to parents in programming intended for adults, not just in general movie viewing. There were no significant

differences for gender (x^2 (4, N=236) = 4.8, *ns*) or geographic location (x^2 (4, N=251) = 2, *ns*) in the responses.

Table 35

Percentages for Boys (n= 97) and Girls (n=139) Reporting Parents' Content Area of Most Concern for "Adult-Only" Programming on Specialty Television

	Boys	Girls
Violence	3	4
Sexual content	44	42
Other	1	3
Sexual content and at least one other area	4	11
Parent's have not said what concerns them most	47	40

Note. N<425 because only participants with access to specialty television in the home were asked to respond and 23 participants did not state their gender.

Parent concern about Internet content. Participants were asked to report what they perceived as the content area of most concern their parents had concerning their Internet use (see Table 36). Sexual content was the most frequent response. Boys were more likely to report "sexual content" than girls and they were also more likely to report that their parents hadn't said.

Table 36

Percentages for Boys and Girls Reporting Parents' Content Area of Most Concern for Websites Their Children Access

	Boys (n= 148)	Girls (n=235)	Overall
Violence	1	0	0
Sexual content	39	20	43
Sexual content and at least one other type of content	13	23	19
Sexual content and chatrooms	9	17	14
Parents have not said what concerns them most	27	20	23

Note. N<425 because 23 participants did not state their gender, 9 additional Cases are missing data for this variable.

Statistical significance of gender, x^2 (5, N=383) = 29.6, p<0.001.

Assessment of parent explanations. Girls were more likely to agree with the statement "Adults do a good job explaining why there are certain movies they don't want me to watch", although not at a level approaching statistical significance (see Table 37). However, urban girls are more likely to agree with the statement than rural girls.

Table 37

Percentages for Boys and Girls Agreeing that "Adults do a good job explaining why there are certain movies they don't want me to watch"

	Rural
Girls (n=76)	51
Boys (n=55)	47
	Urban
Girls (n=161)	66
Boys (n=103)	59

Note. N<425 because 23 participants did not state their gender, 7 additional cases are missing data for this variable.

* Statistical significance of area for girls, x^2 (1, N=237) = 4.6, p<0.05.

Getting caught breaking rules. Neither gender nor geographic location was statistically significant for how parents react to catching their children breaking media related rules, but only 12% (n=51) of the overall sample reported that their parents discuss with them when they are caught breaking media use rules.

Parents have discussed online pornography. Almost half (49%) of sample reported that their parents had discussed online pornography with them. Gender was not statistically significant for parents discussing online pornography (x^2 (1, N=385) = 2, *ns*). (N<425 because data was missing for 17 cases and 23 participants did not state their gender), however, urban boys (59%) were significantly more likely to report that their parents had discussed it than rural boys (37%).